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Competing on Good Politicians

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Is electoral competition good for political selection? To address this issue, we introduce a theoretical model where ideological parties select and allocate high-valence (experts) and low-valence (party loyalists) candidates into electoral districts. Voters care about a national policy (e.g., party ideology) and the valence of their district's candidates. High-valence candidates are more costly for the parties to recruit. We show that parties compete by selecting and allocating good politicians to the most contestable districts. Empirical evidence on Italian members of parliament confirms this prediction: politicians with higher ex ante quality, measured by years of schooling, previous market income, and local government experience, are more likely to run in contestable districts. Indeed, despite being different on average, politicians belonging to opposite political coalitions converge to high-quality levels in close electoral races. Furthermore, politicians elected in contestable districts have fewer absences in parliament, due to a selection effect more than to reelection incentives.

In politics, personal identity matters. A lot. Would the United Kingdom have had a season of privatization without the leading role of Margaret Thatcher, or the United States a New Deal without Franklin Delano Roosevelt? And what would have happened to the United States had Robert Kennedy become its 37th president? A recent literature has recognized the crucial relevance of the identity of leading politicians in taking policy decisions and ultimately in shaping the development of their party or the entire nation (e.g., see Jones and Olken 2005; Dewan and Myatt 2007; 2008). Similar considerations on the crucial role played by leading persons (that is, CEOs) apply also to the business sector (e.g., see Bertrand and Schoar 2003).

If identity matters, selecting good politicians becomes ever more crucial. But how to achieve an efficient process of political recruitment? Does electoral competition improve political outcomes (see Stigler 1972; Wittman 1989) by leading to the selection of better politicians?

To address these questions, we introduce a model of political selection in a majoritarian system, characterized by plurality rule in single-member districts. Rather than analyzing the self-selection of political candidates, we concentrate on the selection of politicians by parties (leaders). Potential candidates differ in their valence (or quality), which is perfectly observable and is valued by all voters (see Stokes 1963; 1992; Enelow and Hinich 1982; Groseclose 2001), but is costly for the parties. An original feature of our model is allowing the parties to target specific districts—which differ in their contestability or marginality—by allocating candidates of a particular valence. Thus, in contrast to many existing contributions in the literature, we focus on the effect of political competition on the primal party decision, that is, the selection and allocation of politicians, rather than on the policy choice. Our theoretical model predicts that electoral competition has beneficial effects, because parties choose more high-valence politicians and send them to the most contestable districts.

To test this prediction, we use a recent dataset on all Italian members of parliament elected in majoritarian (single-member) districts from 1994 to 2006. In that period, Italy represented the perfect testing ground for our theoretical model for several reasons. First, parties (leaders) played a crucial role in the recruitment of political candidates. Second, a majoritarian system was used to elect one of the largest assemblies in the world. Third, for historical reasons, there was large geographic variation in the ideological strongholds of the two major political coalitions (center-right versus center-left). All of these features provide a considerable amount of within-country variation in the degree of political contestability. We use this variation as the treatment of interest and evaluate its effect on political selection.

In particular, to measure the degree of political contestability of a single electoral district, we construct two different indicators: (i) the margin of victory in the previous political election and (ii) the district-specific ratio of the number of swing voters to the difference between the ideological voters of the two main coalitions. The latter indicator is estimated using electoral data from the previous European elections, which take place under a proportional system and are largely believed to capture ideological voting.

Valence is captured by multiple measures: years of schooling, previous market income, and past experience in local governments. The rationale for each measure is simple. Years of schooling capture the acquisition of formal human capital and skills. Preelection income, controlling for the occupational type, is a measure of market success and ability. The use of administrative experience is linked to the idea that

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lower-level elections can be used by high-quality politicians to build reputation and by voters to screen better candidates.[1]

Consistent with our theoretical framework, we find evidence of an ex ante selection effect of political competition: politicians with more years of schooling, higher preelection income, and more local experience tend to be allocated to contestable (nonsafe) districts. Indeed, the two main political coalitions show on average very different patters of political selection: the center-right coalition tends to recruit politicians with higher education, and the center-left to select more women and more politicians with previous administrative experience. However, evidence from a regression discontinuity design shows that both parties converge to the same high-valence type in close electoral races. In other words, when the going gets tough, the tough candidates get the job from their parties.

To capture ex post quality of the elected officials, we consider the absenteeism rate in electronic parliament votes, which we consider a proxy for shirking or rent-seeking.[2] Our empirical evidence shows that politicians elected in contestable districts display a lower absenteeism rate. This is consistent with the selection of better politicians in those districts, but may also be driven by reelection incentives. To disentangle the two channels, we exploit some (exogenous) changes in political alliances forced by national leaders, which had the effect of altering the degree of contestability of some local districts from one election to the next.[3] Interestingly, we find that the effect of political selection strongly dominates, because the ex ante contestability of the district has a sizable impact on performance even when we control for the change in reelection incentives. An incentive effect does exist, however, particularly for low-valence politicians, as we find that, when a safe district turns contestable, low-valence incumbent politicians tend to exert more effort.

Our results hence point to the existence of a positive effect of political competition on the selection of politicians in a country—Italy—characterized by a majoritarian electoral rule and by strong parties featuring fairly centralized recruitment of candidates for parliament. However, a positive association between the ex ante quality of politicians and political competition can be expected to hold also in majoritarian environments with strong parties but local recruitment patterns, such as the United Kingdom, or even with a weak party structure, such as the United States. The last case may occur if voters at primary elections select their party's candidates by trading off ideological loyalty for better skills, in order to attract independent voters at the general election. More generally, whenever the electoral race is tight and unaligned voters care about the personal attributes of candidates, we expect to observe competition on good politicians. From a normative perspective, our findings thus call for institutions and policies able to (i) increase voters' information and awareness about the valence of political candidates and (ii) enhance the degree of contestability of electoral races.

RELATED LITERATURE

Our paper is related to several strands of the literature. The theoretical framework shares some features with the models in Groseclose (2001) and Besley and Preston (2007). Two ideological parties compete for the votes of ideological and of swing voters. The degree of political competition depends on the distribution of these voters across electoral districts. In contrast to Besley and Preston (2007), where parties choose an economywide policy and are unable to target specific districts, our novelty is to assign to the parties the primal role of selecting candidates and of allocating them to electoral districts. This allocation decision is crucial, because it allows the parties to target specific districts. And, in our setting, when it comes to elections "all politics is local" (Jacobson 1989).

In our model, candidates differ in their valence (see Groseclose 2001; Besley 2005), such as their ability or expertise in problem solving.[4] On valence (or competence), all voters share identical views, as they all prefer more to less (see Stokes 1963; 1992). However, because parties have different (exogenous) ideological positions, valence becomes crucial in determining the choice of the nonideological voters. In our framework, ideological parties thus choose valence in order to win the election. Our model borrows from recent literature that has examined the relation between party ideology and candidate valence. Groseclose (2001) shows that the party with the candidate enjoying an exogenous valence advantage will choose to be more moderate, because this advantage becomes more relevant for lower ideological differences (see also Ansolabehere and Snyder 2000; Aragones and Palfrey 2002). In our model, valence is more relevant for nonideological voters. Building on this intuition, Ashworth and Bueno de Mesquita (2007) endogenize both valence and ideology to show that in equilibrium, parties choose to diverge in policy in order not to compete on (costly) valence. Other models of joint determination of valence and ideology include Schofield (2003) and Dickson and Scheve (2006).

[1] On this point, from a theoretical perspective, see Cooter (2002) and Myerson (2006). Jacobson (1989) and Shugart, Valdini, and Suominen (2005) also use lower-level electoral experience as a proxy for valence.

[2] For instance, Gagliarducci, Nannicini, and Naticchioni (2010) show that the absenteeism rate is positively associated with the amount of outside income received by Italian members of parliament.

[3] The instability of the party system during the period that followed the judiciary scandals known as "Mani pulite" (1992–94) and the switch from a proportional to a majoritarian electoral rule in 1994 produced national changes in political alliances in both the right-wing and left-wing coalitions, which exogenously affected the contestability of many districts in different elections.

[4] Clark (2009) discusses the differences between policy-related valence, which makes a candidate more competent in dealing with some issues, and non–policy related valence, which provides the candidate with an electoral advantage, unrelated to the candidate policy position, such as an "incumbency advantage."

Our model concentrates on the choice of political candidates by the party. This *demand* for politicians has largely been neglected in the theoretical literature, despite the predominant role played by (strong) political parties in most contemporaneous democracies. Among the few contributions, Carrillo and Mariotti (2001) analyze the party decision between an experienced, and thus known, incumbent and a new candidate of uncertain quality in an asymmetric information setting, to show that parties may have an incentive to confirm mediocre incumbents. Mattozzi and Merlo (2010) focus on the recruitment of political candidates by two parties competing in an election. In their framework, parties may find it optimal to attract low-quality politicians, in order to keep the overall level of party service sufficiently high.[5]

A recent literature examines the effect of political competition on policy outcomes. Besley, Persson, and Sturm (n.d.) use different measures of the degree of political competition in U.S. local elections, and find evidence of a positive effect of competition on growth-enhancing policies and, ultimately, on economic growth. Stromberg (2008) analyzes how U.S. presidential candidates allocate resources across states to maximize their probability of winning the election, and shows that this allocation is affected by the number of electoral votes and forecast uncertainty. Dal Bo, Dal Bo, and Snyder (2009) show that political dynasties (that is, intergenerational transmission of political power and elected offices) are less likely to emerge in competitive environments.

Few empirical studies have studied the importance of candidates' valence for electoral competition. Shugart, Valdini, and Suominen (2005) study personal vote-earning attributes under proportional representation. The quality of candidates—measured as local birthplace and lower-level electoral experience—is shown to decline with district magnitude when lists are closed, because quality becomes less useful to parties. In contrast, quality increases with district magnitude when lists are open, because competition gets tighter. Jacobson (1989) also measures candidates' valence as previous experience in any elective public office. He shows that high-quality candidates in the United States decide to run for office only when national conditions favor their party, and that they are able to win more votes for their party, even controlling for the initial favorable conditions that motivated their self-selection decision. Analogously, a recent paper by Atkinson, Enos, and Hill (2009) shows that challengers with higher (perceived) facial competence are more likely to run in more competitive districts. Moreover, their higher facial competence positively affects the vote choice of the unattached voters. Stone, Maisel, and Maestas (2004) investigate the impact of incumbent's valence on political competition. They extend the logic of Black's (1972) "strategic politicians" thesis and use survey data on potential candidates in the United States, to show that a high (perceived) valence of the incumbent deters the entrance of strong challengers. Finally, Green (2007) presents aggregate trends to suggest that British political competition has become more competence-based, because the major parties (as well as the electorate) have converged on the ideological (left–right) dimension.

[5] There exists instead a recent and growing literature on the *supply* (or self-selection) of politicians [see Besley (2005) for a review]. A common theme has been how to attract good politicians. Models that predict adverse selection in politics [see Besley (2004); Caselli and Morelli (2004)] are based on the assumption that the private and political sectors are mutually exclusive, and therefore low-quality individuals have a lower opportunity cost of running for office. Mattozzi and Merlo (2008) emphasize the role of the public office in signaling ability: some high-ability citizens decide to serve for a short period, after which they leave parliament and capitalize on their political experience. Dal Bo and Di Tella (2003) and Dal Bo, Dal Bo, and Di Tella (2006) emphasize how self-selection can also be affected by threats and violence.

THE MODEL

Our model describes the selection and allocation of political candidates into electoral districts by two parties that compete in a majoritarian election. The two parties, D and R, are ideological, and have different bliss points over a national policy, respectively $\widehat{Y}_D < \widehat{Y}_R$. The role of the party (leaders) before the election is to select and allocate candidates into the electoral districts. After the election, the winning party i sets its most preferred national policy, $\widehat{Y}_i$; and each winning candidate provides constituency service for his/her district.

Candidates differ in their valence, which can be high or low. Voters prefer high to low valence. High-valence candidates are called "experts" to convey the idea that they are better equipped at problem solving; this expertise is valued by all voters. Low-valence politicians are called loyalists (to a party) to suggest that their ability is in providing party services; hence it is valued by the party, but not by the voters. Each party i selects a share μ_i of experts (and residually $1 - \mu_i$ loyalists) to allocate to the different districts. Because parties are ideological and care about the national policy, they will use their selection and allocation decisions to try to win the election. Recruiting experts is costly for the parties (see below for a more detailed discussion of this point).

Voters care about the national policy and the valence of the candidates in their district. They can be of three types: ideological supporters of either party's national policy (D and R), or centrist (C), that is, not aligned to any party. Voters in groups D and R are core supporters, and always vote respectively for parties D and R, regardless of the valence of the two parties' local candidates. We embed the voting decision of the centrist (group-C) voters in a standard probabilistic voting model (see Lindbeck and Weibull 1987). Being unaligned, centrist voters strongly care about the valence of the candidates in their districts. Hence, the decision of where to allocate the experts carries important implications for winning the election. The utility that group-C voters living in district k derive from the policy selected by party i and from candidate-i valence is summarized by the expression

$$U_C^k\left(Y_i, y_i^k\right) = (1-\rho)\, v_C\left(Y_i\right) + \rho V_C\left(y_i^k\right), \qquad \textbf{(1)}$$

where $v_C(Y_i)$ is the utility deriving from party-i national policy (or ideology), $V_C(y_i^k)$ with $y_i^k \in \{E_i, L_i\}$ is the utility from the valence of party-i candidate in district k, depending respectively on whether he/she is an expert (E_i) or a loyalist (L_i); and ρ measures the relative importance to the voters of the local candidate valence versus the national policy. We assume symmetry in the two parties' bliss point and in the centrist voters' preferences, so that $v_C(\widehat{Y}_D) = v_C(\widehat{Y}_R)$. Furthermore, centrist voters prefer to have expert candidates in their districts: $V_C(E_i) > V_C(L_i)$.

Following the probabilistic voting approach, we assume that each of these centrist voters may feel ideologically closer to one party or another. The ideological characteristic of each centrist voter is indexed by s, with $s > 0$ if the voter is closer to party R, and vice versa. The distribution of ideology among centrist voters is assumed to be uniform. In particular, to simplify the notation, we consider $s \sim U[-1/2, 1/2]$. The centrist voters' decision is also affected by a common popularity shock to the parties, which occurs before the election and may modify the perception, δ, that all centrist voters have of the image of the two parties. In particular, if $\delta > 0$, party R gains popularity from this preelectoral popularity shock and vice versa for $\delta < 0$. To simplify the algebra, we assume that δ is uniformly distributed, so that $\delta \sim U[-1/2\psi, 1/2\psi]$ with $\psi > 0$.[6]

To summarize, a centrist voter will support party D if the utility obtained from the party-D national policy and from party-D candidate in the district is larger than the sum of the ideological idiosyncratic component, s, of the common shock, δ, and of the utility obtained from party R. That is, a centrist in district k prefers D if $U_C^k(Y_D, y_D^k) - U_C^k(Y_R, y_R^k) - s - \delta > 0$.

Voters and Districts

The distribution of the three groups of voters in the electoral districts determines the districts where the electoral race is tight, and those where instead one of the two parties has a substantial advantage. Call λ_k^j the share of type-j voters in district k with $j \in \{D, C, R\}$. We assume that the share of type-C voters is constant across districts, that is, $\lambda_k^C = \lambda^C \; \forall k$.

It is convenient to define our measure of ex ante contestability of every district k as

$$\lambda_k = \frac{1}{2}\frac{\lambda_k^R - \lambda_k^D}{\lambda^C}. \qquad \textbf{(2)}$$

When parties D and R have an equal share of aligned voters in the district—and hence there is maximum electoral contestability—this index is equal to zero; whereas higher (positive) and lower (negative) values indicate less contestability. Moreover, it is easy to see that party D always wins in those districts with $\lambda_k < -1/2$, in which group-D voters represent a majority of the electorate; whereas party R always prevails in districts with $\lambda_k > 1/2$. Hence, only districts with intermediate values of $\lambda_k \in [-1/2, 1/2]$ are contestable. To characterize the distribution of voters type across districts, we consider a continuum of districts, characterized by a degree of contestability, λ_k, that is uniformly distributed around $\lambda_k = 0$, with a support $\lambda_k \in [-(1-\lambda^C)/2\lambda^C, (1-\lambda^C)/2\lambda^C]$.[7] We refer to the cumulative distribution as $G(\lambda_k)$.

We are now in the position to assess the probability that a party—e.g., party D—wins a contestable district k. Call $\widetilde{s}$ the ideology of the swing voter, that is, of the centrist voter who is indifferent between party D or R. Hence, $\widetilde{s} = U_C^k(Y_D, y_D^k) - U_C^k(Y_R, y_R^k) - \delta$, and all centrist voters with ideology $s < \widetilde{s}$ will support party D. To win district k, the sum of type-D voters (λ_k^D) and of the votes that party D obtains from the centrist voters has to exceed 50%. It is easy to see that this occurs for $\widetilde{s} > \lambda_k$. Thus, the probability of party D winning district k—call it Π_D^k—can be expressed as a function of the popularity shock, δ, and of the district characteristic, λ_k:

$$\Pi_D^k = \Pr\{\delta < U_C^k(Y_D, y_D^k) - U_C^k(Y_R, y_R^k) - \lambda_k = d_k\}, \qquad \textbf{(3)}$$

where d_k can be interpreted as a measure of the ex post contestability of district k; that is, after that the parties' national policy and allocation of candidates are known to the voters. Because the popularity shock is uniformly distributed with density ψ, we can rewrite equation (3) as $\Pi_D^k = 1/2 + \psi d_k$. If the two parties converge to the same allocation of candidates, because the national policies provide the same utility to the centrist voters, then $d_k = -\lambda_k$. However, parties can use the allocation of candidates to modify d_k, and thus their chance of winning district k.

Selection and Allocation of Candidates

To understand the selection and allocation of candidates into districts, it is convenient to summarize the timing of events. Before the election, parties take selection and allocation decisions in two stages. First, they select their shares of expert and loyal candidates, respectively μ_i and $1 - \mu_i$. Second, they choose how to allocate them into the different electoral districts. At each stage, the two parties may take their decisions independently and simultaneously; they know the distribution of the popularity shock taking place before the election, but not its realization. After the popularity shock has occurred, centrist voters decide whom to support between the two candidates running in their district. After the election, the winning party sets its most preferred national policy, and the winning candidate delivers constituency service according to his/her valence.

[6] As discussed below, our results are robust to using any symmetric distribution of the common popularity shock with zero mean.

[7] The use of a symmetric distribution amounts to assuming that no party has an ex ante electoral advantage, and is consistent with our empirical analysis. If a party, say the incumbent, were instead to enjoy such an advantage, the definition of the threshold districts and the subsequent analysis should be modified accordingly.

Because parties are ideological and have preferences over the national policy, they have an incentive to win the election in order to be able to set their most preferred policy. To do this, they use their selection and allocation decisions. Experts increase the probability of winning districts, and hence the election, but have a recruitment cost. Parties will hence compete by selecting and allocating experts to the crucial districts, in order to maximize their expected utility. For party D, the expected utility is

$$u_D = \Pi_D v_D(Y_D) + (1 - \Pi_D) v_D(Y_R) - C(\mu_D), \quad \textbf{(4)}$$

where Π_D, party D probability of winning the election, depends on the selection and allocation of candidates, $v_D(Y_i)$ is the utility deriving from party-i national policy, and $C(\mu_D)$ represents the cost associated with having a share μ_D of experts in the party list. In particular, we assume a linear cost function, $C(\mu) = \gamma\mu$, where γ can be interpreted as the extra wage to be paid to an expert candidate, relative to a loyalist. This additional wage may arise because of experts having better outside options in the labor market (see also Mattozzi and Merlo 2008). Alternatively, $C(\mu)$ can be interpreted as the foregone rents for the party associated with having more experts and hence fewer loyalists, who would have provided more party services, and thus higher rents for the party. The expected utility of party R, u_R, is defined analogously.

To analyze the parties' decisions on the selection and allocation of candidates, it is convenient to work backward. First, we consider a fixed number of experts in the party list, and examine their allocation into the different districts. Second, once the allocation of experts is determined, we characterize the share of experts in the party list that maximizes the expected utility at equation (4). Notice that at each stage the two parties take their decisions simultaneously and independently.

Allocation of Candidates

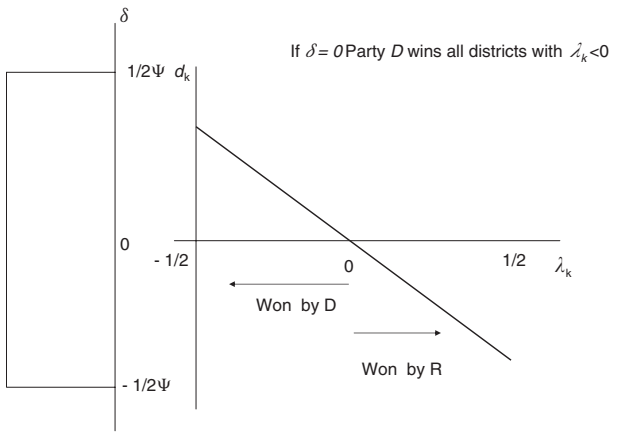
Consider a fixed share of experts for parties D and R, respectively μ_D and μ_R, to be allocated. The difference in utility provided to the centrist voters in district k by the two parties can be written as

$$U_C^k(Y_D, y_D^k) - U_C^k(Y_R, y_R^k) = \rho\left(V_C(y_D^k) - V_C(y_R^k)\right). \quad \textbf{(5)}$$

As experts are more valuable than loyalists to centrist voters, allocating an expert to a district k, where the other party sent a loyalist, amounts to increasing the centrist voters' utility by a positive wedge, $W = \rho[V_C(E) - V_C(L)]$. More centrist voters in that district will then favor the party that allocated the expert. Hence, parties compete on good politicians (experts) to increase their probability of winning a contestable district.

To understand the logic behind this simultaneous allocation game, suppose that only loyal candidates have been sent to districts, and are thus perfectly matched; that is, every party-D loyalist faces a party-R loyalist.

FIGURE 1. Allocation Game, Distribution of Districts, and Common Popularity Shock



This implies that $V_C(y_D^k) - V_C(y_R^k) = V_C(L) - V_C(L) = 0$. By equation (3), party D thus wins a district k if the shock is $\delta < d_k = -\lambda_k$. Moreover, given the distribution of districts (λ_k), party D wins the election—that is, it obtains more than 50% of the districts—if the shock is strictly in its favor: $\delta < d_0 = 0$. In this case, party D wins all the districts with $\lambda_k < 0$, as shown in Figure 1; whereas it ties the election for $\delta = d_0 = 0$.

Thus, the marginal districts to win are in a small interval around $\lambda_k = 0$ (henceforth, district zero, i.e., λ_0). It is convenient to represent a small district interval around λ_0 as $[\lambda_\varepsilon, \lambda_\Xi]$, with $\lambda_0 - \lambda_\varepsilon = \lambda_\Xi - \lambda_0 = \varepsilon$ small enough.

Suppose now that party D sends experts to the district interval $[\lambda_0, \lambda_\Xi]$. Using again equation (3), it is easy to see that party D is now more likely to win districts $[\lambda_0, \lambda_\Xi]$. In fact, party D wins district λ_0 even for a less favorable (i.e., larger) realization of the shock, that is, for $\delta < W$. Define the district $\lambda_w = -W$, such that $d_w = W$. Then, if party D allocates an expert to the most contestable district, λ_0, where party R has instead sent a loyalist, party D wins this district with the same probability with which it wins district $\lambda_w < 0$ (which is ex ante biased in favor of party D) when both parties send a loyalist. Hence, for $\delta = d_0 = 0$, with experts in the district interval $[\lambda_0, \lambda_\Xi]$, party D would win the election, rather than just tying it. Analogously, if party R allocates an expert to the most contestable district, λ_0, whereas party D sends a loyalist, party R's probability of winning district λ_0 will equate the probability of winning district $\lambda_W = W$, such that $d_W = -W$, when both parties allocate a loyalist there.

Districts λ_w and λ_W represent important thresholds, for party D and R respectively. To see this, suppose that party R allocates experts everywhere; then party D would minimize its probability of losing the election by sending experts to the districts between λ_w and λ_Ξ. In this case, party D would win the election if $\delta \leq 0$, and hence with probability 50%. Moreover, allocating

an additional expert to any district would not modify this probability. We call this allocation choice by party D a "defensive" strategy, because party D protects—by sending experts—the contestable districts biased in its favor (those between λ_w and λ_0), and places only few, yet crucial, experts on its opponent's turf (i.e., in the districts between λ_0 and λ_Ξ). With an "offensive" strategy, party D would have placed most (or all) of its experts in the contestable districts biased against it (those between λ_0 and λ_W). It is convenient to define the mass of districts included between λ_w and λ_0 as $\eta/2$; that is, $[G(\lambda_0) - G(\lambda_w)] = \eta/2$. Hence, $\eta/2$ experts are enough for party D to span the districts between λ_w and λ_0, and thus to have a defensive strategy. The same logic applies to party R, with the threshold district being λ_W, and $[G(\lambda_W) - G(\lambda_0)] = \eta/2$. Notice that the mass of crucial districts between λ_w and λ_W is equal to $\eta = [2\lambda^C/(1-\lambda^C)]W$. The share of experts needed to cover all the crucial districts thus depends positively on the proportion of centrist voters (λ^C), on the relative importance that they give to the local policy (ρ), and on the value that they attribute to having an expert in their district, $V_C(E) - V_C(L)$.

The next proposition describes the allocation strategy chosen by the two parties (a formal version of Proposition 1 with a detailed description of the allocation of experts into districts is provided in the Appendix).

Proposition 1. *If both parties have enough experts, $\mu_i > \eta/2$, $i = D, R$, they both play a "defensive" strategy, which consists of placing experts in their own contestable districts and around the most contestable one; if only one party has enough experts, it will adopt an "offensive" strategy, by placing its experts in the other party's contestable districts and around the most contestable one, whereas the opponent party will match the experts around the most contestable one.*

When neither party has enough experts, $\mu_i < \eta/2$, $i = D, R$, and their shares of experts are comparable in size, they both play an "offensive" strategy, by allocating experts in the other party's contestable districts; whereas when neither party has enough experts but one party largely dominates in the share of experts, the dominant party will use an "offensive" strategy, and the weak party will try to match the experts in its own contestable districts.

The above proposition suggests that, with enough experts, both parties can defend their districts and ensure a 50% probability of winning the election; however, they cannot improve upon that. When this defensive strategy is instead unavailable to one of the parties, the strong party will have an incentive to attack the districts biased in favor of the weak party by sending experts; and the weak party will try to match these experts in an attempt to minimize the probability of losing the election. When neither party has enough experts to defend its competitive districts, they will both have an incentive to attack the other party's districts by sending their experts there. If, however, one party has an advantage in share of experts (despite not having enough of them), it will use the offensive strategy to raise its probability of winning above 50%, whereas the weak party will try to match its experts in its own districts to minimize the probability of losing the election.

Selection of Candidates

Once we know how candidates are allocated across districts, we can turn our attention to the selection of the relative shares of experts and loyalists. The objective of party D (leaders) is to maximize expected utility at equation (4), and analogously for party R. The selection of experts may increase the probability of winning the election, but at a cost, because experts have to be rewarded with an extra wage, γ.

It is useful to define the difference in utility for party D when the national policy is set by this party ($\widehat{Y}_D$) or by the opponent ($\widehat{Y}_R$) as $\Delta v_D = v_D(\widehat{Y}_D) - v_D(\widehat{Y}_R)$. Analogously for party R, we have $\Delta v_R = v_R(\widehat{Y}_R) - v_R(\widehat{Y}_D)$. Due to symmetry, we have $\Delta v_R = \Delta v_D = \Delta v$. The next proposition describes the equilibrium selection and allocation strategy by the two parties, for a sufficiently low cost of acquiring an expert.

Proposition 2. *For $\gamma < [(1-\lambda^C)/\lambda^C]\psi\Delta v$, the equilibrium share of experts chosen by both parties is $\mu_D = \mu_R = \eta/2 + \varepsilon$. The corresponding allocation of experts is $[\lambda_w, \lambda_\Xi]$ for party D, and $[\lambda_\varepsilon, \lambda_W]$ for party R. Hence, experts are always elected in the most competitive districts $[\lambda_\varepsilon, \lambda_\Xi]$. Both parties win the election with equal probability, $\Pi_D = \Pi_R = 1/2$.*

To see the intuition for the result, suppose that party R has selected only a few experts, $\mu_R < \eta/2$. If the cost of the experts, γ, is sufficiently low, party D will have an incentive to choose a larger share of experts in order to push its probability of winning the election above 50%, and therefore to increase its expected utility. For a sufficiently low γ, party D will find it convenient to increase its probability of winning the election by having $\mu_D = \eta/2 + \varepsilon$ experts. And so will party R. When a party has selected (and properly allocated) $\eta/2 + \varepsilon$ experts, the opposing party cannot increase its probability of winning the election above 50%, and any additional expert above the share of $\eta/2 + \varepsilon$ would thus represent a pure cost bringing no additional benefit. This allocation implies that both parties send experts to the most competitive districts; as a result, in the interval $[\lambda_\varepsilon, \lambda_\Xi]$, only experts are elected.

The equilibrium share of experts thus largely depends on the competitiveness of the political system. In particular, as stated in the next proposition, a majoritarian electoral system with a larger number of competitive districts is associated with a larger share of experts selected (and allocated) by the competing parties.

Proposition 3. *An increase in the share of centrist voters (λ^C) increases the equilibrium share of experts chosen by both parties, $\mu_D = \mu_R = \eta/2 + \varepsilon$, as long as the following condition holds: $\gamma < [(1-\lambda^C)/\lambda^C]\psi\Delta v$.*

The intuition behind this proposition is straightforward. An increase in the share of centrist voters (λ^C) increases the share of contestable districts, η, and therefore also the share of experts needed in equilibrium to cover these districts. However, an increase in λ^C reduces the impact that adding few more experts has on the probability of winning the elections. To the extent that the cost of the experts is sufficiently low, despite this reduction, the marginal benefit of adding experts still overweights its cost, and parties will choose to span all $\eta/2 + \varepsilon$ crucial districts, and will thus increase their equilibrium share of experts.

ITALIAN INSTITUTIONS AND POLITICS FROM 1994 TO 2006

In order to test the main empirical implication of our theoretical model, we use data about the members of the Italian parliament (House of Representatives and Senate) from 1994 to 2006, which refer to legislative terms XII (1994–96), XIII (1996–2001), and XIV (2001–06). During this period, Italy experienced a mixed electoral system (75% majoritarian and 25% proportional). In the majoritarian tier, members of parliament were elected in single-member districts with plurality voting. In the proportional tier, they were selected from closed party lists at the regional level (House) or from the best losers in the majoritarian districts (Senate).

The switch in 1994 from an open-list proportional system to a mixed-member rule was accompanied by major political changes, including the breakdown of the existing party system that followed judicial scandals for corruption charges involving the leaderships of all government parties.[8] As a result, the 1994 elections featured new parties competing under the mixed electoral system. A right-wing coalition led by Silvio Berlusconi, which included his party, *Forza Italia*, together with *Lega Nord*, *Alleanza Nazionale*, and *Centro Cristiano Democratico*, won the general election with 42.8% of the votes, and 57% of the seats in the House. A year later, a political crisis in the center-right coalition, initiated by *Lega Nord* (the separatist movement founded and led by Umberto Bossi), brought down the first Berlusconi government, and led to a one-year-long "technical" government by Lamberto Dini (a former minister in the Berlusconi government). In 1996, *Lega Nord* ran alone in the general election, securing 10% of votes at the national level, a remarkable result for a party with a strong regional base. The elections, however, were won by the center-left coalition *Ulivo* (Olive Tree), led by Romano Prodi. Like the first center-right alliance, *Ulivo* resembled more an electoral cartel plagued by internal competition, rather than a government coalition (see Di Virgilio, 1998). In 1998, the leftist *Rifondazione Comunista*, which was part of the center-left electoral coalition, but had not joined the cabinet, caused the fall of the Prodi government. The center-left coalition managed to survive for the rest of the term by forming three other cabinets, but—without *Rifondazione Comunista*—lost the next general election in 2001. It was again the turn of Silvio Berlusconi and his center-right coalition (this time including *Lega Nord*) to rule the country until 2006, which is the end of our sample period.[9]

The introduction of a mixed electoral system did not reduce the dominance of party organizations in Italian politics, as they maintained a firm grip over the recruitment of political candidates in both the majoritarian and proportional tiers. In contrast to other political systems characterized by single-member districts, Italy displayed a centralized process of candidates' selection, where party leaders exercised direct control over nominations, rather than leaving discretion to local party branches. In fact, very few representatives were rooted in a particular constituency (see Di Virgilio 1998; Ferrara 2004b). The selection and allocation game described in our model thus provides a close representation of this political recruitment process. Furthermore, Italy represents the ideal testing ground for the main prediction of our model, because of other peculiar features of the institutional and political framework, namely: (i) the 75% majoritarian electoral system in place from 1994 to 2006 was fairly isolated and not contaminated by the 25% proportional tier (see Ferrara 2004a); (ii) Italy has one of the largest legislative assemblies in the world (945 members of parliament against, for instance, 535 in the United States or 575 in France); (iii) there exists a large geographic variation in the ideological strongholds of the center-right and center-left coalitions. These features provide a considerable amount of within-country variation in the degree of political contestability of electoral districts, which allows us to evaluate the impact of political competition on political selection as predicted by Proposition 2 in our model.

DATA SOURCES AND VARIABLES

We use data on all Italian members of parliament (House and Senate) elected in single-member districts in the general elections of 1994, 1996, and 2001. In each district, one representative was elected by simple plurality according to a pure first-past-the-post election. The original sources used to collect the data include the Annals of the Italian Parliament (*La Navicella*) for demographic information, as well as professional and political experience; the Archive of Tax Returns of the members of the Italian Parliament (*Servizio*

[8] Note, however, that the widespread scandals and indictments of members of parliament (also known as "Tangentopoli") preceded our sample period and marked the political downfall of parties and politicians that are not contained in our sample. Indeed, the so-called "Parlamento degli inquisiti" (i.e., "parliament of the indicted") was in the XI legislative term (1992–94), right before the beginning of our sample period.

[9] After three terms under a mixed system, in the eve of the 2006 general election, the Italian electoral system was again modified to move back to a proportional system, which—unlike the proportional system in place between 1948 and 1994—featured coalition and party thresholds to gain parliament seats, a premium (in terms of additional seats) for the winning party (or coalition), and closed party lists.

Prerogative e Immunità) for income information; and the Italian Parliament Press Office (*Ufficio Stampa*) for data on individual attendance at voting sessions.[10]

The dataset contains detailed information on the following political and demographic characteristics: self-declared demographics (age, gender, place of birth, place of residence, level of education, field of education, previous job, and marital status); political experience (this includes being a member of the executive committee of a party at the local, regional, or national level; past and current appointments as minister or state secretary; past appointments at the local government level, such as municipality, province, or region; past appointments in parliament); current appointments in the government or in parliament (whether or not a politician is in a second committee, and whether or not he/she is president or vice president of the parliament or of a single committee); political party affiliation; district of election; and coalition type (i.e., majority versus opposition coalition). The dataset also contains yearly total income information, as reported in individual tax returns, as well as information on absences in floor voting sessions, not attended without any legitimate reason.

Measuring Political Competition

We decided to restrict our analysis to politicians elected in majoritarian districts, because for them we can measure the degree of political contestability, that is, the expected electoral gap between the two major political coalitions. There were 705 districts (475 in the House and 230 in the Senate) for each legislative term. Hence, our sample could consist of at most 2,115 observations across the three terms covered by the dataset. After dropping observations with missing values in the relevant variables, we are left with a sample of 1,977 observations for terms XII–XIII–XIV (1,307 when we consider only terms XIII–XIV).

Table 1 shows that, in 25% of the districts, the center-left coalition won all three elections, whereas the center-right always won in 34%. The remaining 40% swung at least once. Safe (nonswing) districts are particularly concentrated in the northeast and center of the country (see Table 2). The lagged margin of victory in absolute value (*MV*) is an obvious measure of the ex ante contestability of the district: for example, if a coalition won by 30 percentage points in the previous election, it would be very difficult for the other coalition to fight back and win the district the next time. By the same token, alternative measures of the safeness of a district could be *MV* being greater than 5 (*Safe1*) or greater than 10 (*Safe2*) percentage points. The distribution of the margin of victory in single-member districts—expressed in percentage points—is positively skewed. In about 29% of the districts, the lagged margin of victory was lower than 5, whereas in about 49%, it was lower than 10.

[10] For more information, see Gagliarducci, Nannicini, and Naticchioni (2010). For other empirical studies on the evolution of the Italian parliament elite, see Verzichelli (1998) and Merlo et al. (2010).

TABLE 1. Patterns of Political Victory in Single-member Districts

Pattern	Obs.	Percent
Left–Left–Left	179	25.39
Right–Left–Left	55	7.80
Left–Right–Left	12	1.70
Right–Right–Left	9	1.28
Left–Left–Right	42	5.96
Right–Left–Right	117	16.60
Left–Right–Right	25	3.55
Right–Right–Right	243	34.47
Other	23	3.26
Total	705	100.00

Notes: Left stands for victory of the center-left coalition; *Right* stands for victory of the center-right coalition; *Other* means victory of at least one third-coalition candidate. The first, second, and third term in each pattern refer to the XIIth, XIIIth, and XIVth legislative term, respectively.

TABLE 2. Swing Districts According to Geographic Location

	No Swing (%)	Swing (%)
Northwest	70.49	29.51
Northeast	77.91	22.09
Center	78.83	21.17
South	65.14	34.86
Islands	69.75	30.25
Total	72.06	27.94

Notes: Swing is equal to one if the winner belongs to a different coalition this the incumbent. ISTAT geographic classification. Legislative terms XIII and XIV; 1,410 districts.

All these measures, based on the lagged margin of victory, should be good predictors of the swinging probability of a district, but their correlation with the characteristics of the individual candidates could be biased when the incumbent runs for reelection. In this case, the lagged margin of victory would refer to an election run by the same politician, and thus partly depend on his/her skills. Furthermore, measures based on the lagged margin of victory are not available for the XII legislative term, because the majoritarian districts were first introduced in this term. To address both issues, we construct an additional measure of contestability using the district-specific vote shares of different parties in the European elections, held either in 1994 or in 1999. We consider as ideological (or loyal) voters those who supported the center-left (*D*) or center-right coalition (*R*) in the previous European election. These elections, in fact, were held under proportional representation to appoint the Italian representatives in the European Parliament. Their turnout rate has usually been lower than in national elections, because government decisions are not at stake. It is therefore plausible to assume that voters cast a more ideological vote in this type of electoral contest than in the general (political)

elections. Our new measure of safety (*Safe3*) is equal to one if

$$\frac{1 - D - R}{|D - R|} \leq 1. \quad \textbf{(6)}$$

This measure can be interpreted as the empirical counterpart of $1/\lambda_k$ in the theoretical model. Furthermore, it has the advantage of allowing us to identify changes in the degree of contestability of a district due to national variations in political alliances within each coalition. As discussed above, large modifications occurred twice: before the 1996 election, when the separatist party *Lega Nord* left the center-right coalition; and before the 2001 election, when the leftist party *Rifondazione Comunista* left the center-left coalition. These alliance breakdowns originated from the (narrow) incentive of the two small parties to keep up their (proportional) vote share and bargaining power, and involved decisions by the national leaders. Their impact on the political future of backbenchers and on the contestability of districts was hardly internalized, as suggested by the fact that after the crises some incumbents left the two small parties to join large coalition parties. As a result, the political decisions of the leaders of these small parties, which followed purely "proportionalistic" motivations, ended up affecting the destiny of the representatives of big parties in marginal districts.[11] Hence, these national shocks altered the degree of contestability of some districts in a way that can be interpreted as exogenous with respect to the characteristics of politicians previously elected in those districts.

Table 3 shows that all our measures of ex ante contestability are correlated with the ex post probability that a district swings from one coalition to the other. The probability of swinging is always higher when our safeness indicators are equal to zero, and the differences are statistically significant either at the 1% level (*Safe1* and *Safe2*) or at the 5% level (*Safe3*). The probability of swinging also increases with the lagged margin of victory.

TABLE 3. Swing Districts According to the Lagged Margin of Victory

	No Swing (%)	Swing (%)
	Margin of Victory	
0–5	59.31	40.69
5–10	56.12	43.88
10–15	72.31	27.69
15–20	85.21	14.79
20–25	87.79	12.21
25–30	93.62	6.38
>30	97.35	2.65
	Safe1	
No	59.31	40.69
Yes	77.16	22.84
	Safe2	
No	57.96	42.04
Yes	85.83	14.17
	Safe3	
No	69.87	30.13
Yes	75.22	24.78
Total	72.06	27.94

Notes: Swing is equal to one if the winner belongs to a different coalition with respect to the incumbent. *Margin of victory* is the lagged margin of victory in the single-member district. *Safe1* is equal to one if the lagged margin is greater than 5 percentage points. *Safe2* is equal to one if the lagged margin is greater than 10 percentage points. *Safe3* is equal to one if $(1 - L - R)/|L - R| < 1$, where L (R) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the previous European elections. Legislative terms XIII and XIV; 1,410 districts.

Measuring Valence

The above measures of political competition represent our treatment of interest. We want to evaluate whether increasing the intensity of this treatment affects the patterns of political selection. In other words, we want to assess whether political parties allocate candidates with different (ex ante) valence according to the degree of contestability of each district. In line with Krasno and Green (1988), we think of quality (or valence) as something that exists in advance of and separate from other aspects of the electoral campaign. In particular, we measure valence as (i) years of schooling, (ii) previous market income, and (iii) past experience in local governments. The rationale for each measure is simple. Years of schooling capture the acquisition of formal human capital and skills.[12] Preelection income—controlling for the previous occupation—is a measure of market success and ability. The use of administrative experience is linked to the idea that lower-level elections can be used by high-quality politicians to build reputation and by voters to screen better candidates. Previous empirical studies have usually used lower-level electoral experience as a proxy for valence (see Jacobson 1989; Shugart, Valdini, and Suominen 2005).[13]

Table 4 summarizes the preelection characteristics of the politicians in our sample, according to the contestability of the districts where they were elected (as captured by the indicator *Safe2*). On average, candidates allocated to nonsafe districts are more educated, have lower parliament or government experience but greater local government experience, and declare higher preelection incomes. Physicians tend to run in more contestable districts. Party officers, in contrast, are allocated to safer districts.

[11] On the crisis of the center-right coalition in the XII term, see Di Virgilio (1998); on the crisis of the center-left coalition in the XIII term, see Legrenzi (1998).

[12] Besley and Reynal-Querol (2009) use the same measure to assess political selection in democracy versus autocracy. Zhang and Congleton (2008) find a positive correlation between the educational levels of U.S. Presidents and aggregate economic outcomes.

[13] The proposed measures, of course, are not the only conceivable way to proxy for the theoretical construct "valence," which has been referred to as any observable attribute that is positively valued by voters irrespective of their ideological position. In-office performance or ability in collecting campaigning funds could be other possible measures, but we prefer to focus on individual characteristics that are pre-determined and not affected by reelection incentives.

TABLE 4. Ex Ante Characteristics of the Members of Parliament

	Safe2				
	No	Yes	Difference	−diff95%	+diff95%
Male	0.928	0.906	0.022	−0.007	0.051
Age	51.416	50.728	0.688	−0.289	1.665
Married	0.824	0.791	0.033	−0.009	0.074
Years of Schooling	16.103	15.754	0.349	0.132	0.567
Freshman	0.458	0.387	0.071	0.019	0.122
Incumbent	0.277	0.351	−0.074	−0.122	−0.025
Parliament Appointment	0.098	0.151	−0.054	−0.088	−0.019
Govt. Appointment	0.065	0.111	−0.046	−0.076	−0.017
Local Govt. Experience	0.608	0.558	0.050	−0.001	0.102
Preelection Income	0.113	0.083	0.029	0.005	0.053
Lawyer	0.164	0.132	0.032	−0.006	0.069
Party Officer	0.053	0.090	−0.037	−0.064	−0.010
Teacher	0.088	0.077	0.011	−0.018	0.040
Clerk	0.029	0.051	−0.022	−0.043	−0.001
Physician	0.094	0.061	0.032	0.004	0.061
Entrepreneur	0.091	0.095	−0.005	−0.035	0.026
Self-Employed	0.092	0.098	−0.006	−0.037	0.025
Executive	0.089	0.097	−0.008	−0.038	0.023
Professor	0.091	0.118	−0.027	−0.060	0.005
Bureaucrat	0.075	0.064	0.011	−0.016	0.037
Union Representative	0.023	0.023	0.001	−0.015	0.016
Journalist	0.069	0.064	0.005	−0.022	0.031

Notes: Safe2 is equal to one if the lagged margin of victory is greater than 10 percentage points. *−diff95%* and *+diff95%* represent the lower and upper bound of the 95% confidence interval of *Difference*, respectively. All variables are dummies, except *Age*, *Years of Schooling*, and *Preelection Income* (in million of euros, 2004 prices). *Freshman* means that the previous parliamentary tenure is zero. *Parliament Appointment* captures whether the politician has previously been president or vice president of the parliament, or of a single committee. *Government Appointment* captures whether the politician has previously been minister or vice minister. *Local Government Experience* stands for previous institutional experience at the local level (e.g., mayor). *Preelection income* is the total taxable income in the year before election (freshmen only). Job dummies refer to the preelection occupation and the omitted category includes blue collars and students. Legislative terms XIII and XIV; 1,307 observations.

TABLE 5. Absences and Appointments of the Members of Parliament

	Safe2				
	No	Yes	Difference	−diff95%	+diff95%
Absenteeism Rate					
Whole Term	0.228	0.363	−0.135	−0.162	−0.109
Last Year	0.206	0.264	−0.059	−0.086	−0.031
Future Parl. Appointment	0.151	0.151	0.000	−0.041	0.042
Future Govt. Appointment	0.085	0.038	0.047	0.022	0.072

Notes: *Safe2* is equal to one if the lagged margin of victory is greater than 10 percentage points. *−diff95%* and *+diff95%* represent the lower and upper bound of the 95% confidence interval of *Difference*, respectively. *Absenteeism Rate* is the percentage of votes missed without any legitimate reason. *Future Parliament Appointment* captures whether the politician becomes president or vice president of the parliament, or of a single committee, after the election. *Future Government Appointment* captures whether the politician becomes minister or vice minister after the election. Legislative terms XIII and XIV; 1,307 observations.

Table 5 instead summarizes information on the ex post behavior and appointments of the members of parliament; Politicians elected in contestable districts tend to work harder in parliament, that is, they display a lower absenteeism rate in electronic votes, both overall and at the end of the legislative term.[14] It is worth noticing that politicians elected in contestable districts have a higher probability of entering the government (if their coalition wins the general election), although they have lower previous government experience than politicians running in safe districts (see again Table 4). This is consistent with the view that

[14] Attendance does not refer to any committee's activity, which we could not recover. Cases of nonattendance because of parliament missions and cabinet meetings are not counted as absences. Electronic votes account for about 90% of total floor votes (almost the totality if the vote was on a final bill approval), the rest being held by hand counting.

candidates in contestable districts are more skilled, and are therefore rewarded for winning tougher races.

THE IMPACT OF POLITICAL COMPETITION ON VALENCE

To evaluate whether any predetermined characteristic (X_{ijt}) of politician i in district j at time t is associated with the degree of contestability of the district where he/she is elected (C_{ijt}), we implement the following set of regressions (depending on the measure used to capture contestability):

$$C_{ijt} = \delta_t + \gamma_j + \alpha URB_j + \beta X_{ijt} + \eta_{ijt}, \qquad (7)$$

where regional dummies γ_j control for geographical factors, δ_t for time fixed effects, the dummy URB_j captures whether the electoral district belongs to an urban or rural area, and the error terms η_{ijt} are clustered at the individual level. When C_{ijt} is a dummy, we estimate a Probit model; when it is continuous, we use OLS. These estimations can be seen as a direct test of the main empirical prediction of our model, which suggests that high-quality candidates (defined on the basis of the ex ante observable characteristics that we use as proxies for valence) are more likely to run (and then to be elected) in contestable districts (see Proposition 2). The inclusion of the urban dummy and region fixed effects aims at removing the endogeneity problem due to (unobservable) local factors that might be correlated with both political selection and the degree of contestability.[15]

Estimation results are reported in Table 6. To control for the additional endogeneity problem arising from the spurious association between C_{ijt} and X_{ijt}, which arises when C_{ijt} is based on the lagged margin of victory and is thus partly affected by the skills of the incumbent who is running for reelection, we also restrict the sample to nonincumbents only.[16] To evaluate the effect of preelection income, we further restrict the sample to freshmen, for whom preelection income refers to private activity and can thus be interpreted as market skills (controlling for occupation). For these three samples (all, no incumbents, and freshmen only), we estimate equation (7) using our four measures of political competition: the three measures based on the lagged margin of victory (*Safe1*, *Safe2*, and *MV*), available for terms XIII and XIV; and the measure based on the European elections (*Safe3*), available for the terms XII, XIII, and XIV. This is why the sample size of the estimate on *Safe3* is always larger in the three (sub)samples.

The results show that more years of schooling, past local government experience, and higher preelection income increase the probability of running for election in a contestable (nonsafe) district. In other words, the harsher is political competition, the higher is the probability that political parties rely on high-valence candidates. These are defined as politicians with higher educational attainments or private income—both proxies for market skills—or politicians who proved their political ability in subsequent rounds of local elections, which can be seen as "filters" for politicians' quality in a federal system (see Cooter 2002; Myerson 2006). The results are robust to the use of different contestability measures. We interpret this evidence as a validation of Proposition 2 in our model.[17]

From a quantitative point of view, the estimates in Table 6, using for example the *Safe1* indicator in the subsample without incumbents, suggest that two more years of schooling—equal to one standard deviation—increase the probability of running in a contestable district by 5.2 percentage points (i.e., by about 7% with respect to the average). Similarly, past administrative experience lowers the probability of running in a safe district by 6.8 percentage points (i.e., by 9%). Looking at the subsample of freshmen, even if we control for previous job fixed effects, preelection income has a negative impact on the probability of running in safe districts for two out of the four indicators. In particular, if we look at *Safe2*, an increase in preelection income equal to one standard deviation (421,000 euros) reduces the probability of running in a safe district by 35.4 percentage points (i.e., by 41%). An income increase of 100,000 euros would still produce a sizable effect, equal to 8.4 percentage points.[18]

[15] To fully control for unobservable confounding factors at the local level, we also estimated equation (7) with the inclusion of district fixed effects, and the results were qualitatively similar to those presented below for the baseline specification. Because of the limited time variation in our data—which contain either two or three legislative terms, depending on the measure of political competition—the inclusion of district fixed effects is however demanding in terms of degrees of freedom and decreases accuracy, leading to point estimates with reduced statistical significance in some cases (results available upon request).

[16] In principle, the characteristics of a high-quality candidate, if matched with a high-quality opponent in equilibrium, should not affect the margin of victory in the district. However, in some nonmarginal districts a high-quality candidate of a party could still be matched by a low-quality candidate from the other party. In these cases, the lagged margin of victory is affected by the incumbent who eventually runs for reelection. By focusing on no incumbents only, we can avoid this potential problem and address the decision of parties to allocate new candidates in safe versus marginal districts.

[17] Interestingly, when we use the entire sample, the results are statistically significant only with *Safe3*. The other indicators—based on the lagged margin of victory—turn significant only when we restrict the sample by dropping incumbents. This is consistent with the concern that the (incumbent) endogeneity discussed above could downward bias the estimate of the association of political competition with candidates' quality.

[18] Of course, all these effects have to be interpreted as *ceteris paribus*; that is, they take into account the net contribution of every observable quality measure controlling for the others. An alternative empirical strategy would be to estimate a set of *Seemingly Unrelated Regression Equations* (SURE) with our proxies for valence as dependent variables, controlling for the remaining observable characteristics and allowing the error terms of the equations to be correlated. We also implemented this set of estimations and they convey the same message as our baseline estimates (results available upon request).

TABLE 6. The Impact of Political Competition on Political Selection

	All Sample				No Incumbents				Freshmen Only			
	(1) *Safe1*	(2) *Safe2*	(3) *MV*	(4) *Safe3*	(5) *Safe1*	(6) *Safe2*	(7) *MV*	(8) *Safe3*	(9) *Safe1*	(10) *Safe2*	(11) *MV*	(12) *Safe3*
Male	−0.060	−0.018	−2.309	0.092*	−0.077	0.035	−1.051	0.113**	−0.041	0.123	1.270	0.133**
	[0.045]	[0.056]	[1.691]	[0.047]	[0.053]	[0.065]	[1.544]	[0.049]	[0.080]	[0.093]	[2.083]	[0.064]
Age	−0.001	−0.002	−0.086**	−0.001	−0.000	−0.003	−0.105**	−0.001	−0.001	−0.000	−0.085*	−0.001
	[0.001]	[0.002]	[0.038]	[0.001]	[0.002]	[0.002]	[0.041]	[0.001]	[0.002]	[0.003]	[0.051]	[0.002]
Married	−0.036	0.012	−0.274	−0.079***	−0.069*	−0.006	−0.966	−0.077**	−0.104**	−0.040	−1.493	−0.070
	[0.032]	[0.039]	[0.925]	[0.029]	[0.039]	[0.046]	[1.006]	[0.031]	[0.050]	[0.064]	[1.404]	[0.043]
Years of Schooling	−0.013	−0.011	−0.222	−0.014*	−0.026***	−0.016	−0.505**	−0.017**	−0.026*	−0.022	−0.609*	−0.016
	[0.008]	[0.009]	[0.205]	[0.007]	[0.010]	[0.011]	[0.241]	[0.008]	[0.014]	[0.015]	[0.313]	[0.010]
Parl. Appointment	0.028	0.110**	3.427***	−0.054	0.030	0.083	2.972*	−0.044				
	[0.039]	[0.047]	[1.195]	[0.041]	[0.057]	[0.066]	[1.549]	[0.056]				
Govt. Appointment	0.082**	0.109**	0.796	−0.151***	−0.008	0.046	−0.165	−0.121**	0.046	0.171	2.026	−0.259*
	[0.041]	[0.052]	[1.106]	[0.050]	[0.065]	[0.073]	[1.421]	[0.061]	[0.153]	[0.166]	[3.458]	[0.146]
Local Govt. Experience	−0.015	−0.034	−0.923	−0.057**	−0.068**	−0.097***	−2.508***	−0.061**	−0.051	−0.112**	−2.381**	−0.110***
	[0.026]	[0.030]	[0.697]	[0.025]	[0.033]	[0.037]	[0.775]	[0.027]	[0.043]	[0.049]	[0.991]	[0.034]
Urban Area	−0.019	−0.019	−1.522**	−0.015	0.004	0.004	−0.955	−0.015	0.025	0.019	−0.350	−0.030
	[0.025]	[0.029]	[0.630]	[0.023]	[0.031]	[0.035]	[0.713]	[0.026]	[0.041]	[0.047]	[0.893]	[0.033]
Preelection Income									−0.245	−0.841***	−6.809***	0.025
									[0.178]	[0.261]	[2.602]	[0.024]
Job Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Region Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Obs.	1,307	1,307	1,307	1,977	896	896	896	1,566	531	531	531	978

Notes: If *Safe1*, *Safe2*, or *Safe3* as dependent variable: Probit estimation (marginal effects reported). If *MV* as dependent variable: OLS estimation. *MV* is the lagged margin of victory in the single-member district (available for legislative terms XIII and XIV). *Safe1* is equal to one if *MV* is greater than 5 percentage points. *Safe2* is equal to one if *MV* is greater than 10 percentage points. *Safe3* is equal to one if $(1 - L - R)/|L - R| < 1$, where L (R) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the European elections (available for legislative terms XII, XIII, and XIV). *Urban area* is a dummy capturing whether the electoral district belongs to an urban or rural area. Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

CONVERGENCE OF POLITICIANS' ATTRIBUTES IN CLOSE RACES

In the previous section, we showed that good politicians are more likely to run (and hence to be elected) in contestable districts, as predicted by Proposition 2 in our model. But is this allocation strategy common to both political coalitions? Is there any difference in political selection between the center-right and center-left? To shed light on this (complementary) point, we proceed in two steps. First, we look at any statistically significant difference in the observable characteristics of center-right versus center-left members of parliament. Second, we evaluate whether these differences (if any) survive in close elections, by implementing a regression discontinuity design (RDD) on the margin of victory of one coalition over the other, in the spirit of Lee (2008). So far, the latter identification strategy has been used to estimate the impact of political parties on policy outcomes [see Ferreira and Gyourko (2009) for the United States; and Pettersson-Lidbom (2008), for Sweden]. We instead use it to test for the presence of intrinsic differences in the political selection decisions of the main political coalitions in Italy. In fact, if there was any intrinsic difference in the political personnel of the two coalitions, this should remain even in close elections, that is, when the victory of one coalition over the other is due to random events.

Formally, we calculate the margin of victory of the center-right coalition (MVR) in each district: this measure is positive (negative) in all districts won by the center-right (center-left) coalition. We then look at the predetermined characteristics X_{ijt} of politician i elected in district j at time t (with a particular attention to our valence indicators) and fit a p-order polynomial in MVR on either side of the threshold $MVR = 0$, at which the electoral result sharply changes in favor of the center-right:

$$X_{ijt} = \alpha + \tau D_{ijt} + \sum_{k=1}^{p} \delta_k MVR_{ijt}^k + D_{ijt} \cdot \sum_{k=1}^{p} \beta_k MVR_{ijt}^k + \psi_{ijt}, \quad \textbf{(8)}$$

where $D_{ijt} = 1[MVR_{ijt} > 0]$ and the error terms ψ_{ijt} are clustered at the individual level. The parameter τ identifies the effect of interest: that is, whether politicians elected in close races (i.e., at $MVR = 0$) are intrinsically different in their observable characteristics according to the political coalition they belong to. The underlying assumption of this identification strategy is that electoral outcomes depend on both predictable elements (such as candidates' skills and valence) and random chance (such rain on election day), which, however, becomes crucial only for close electoral races. It is important to notice that in this analysis we are using the actual (instead of the lagged) margin of victory, so that the victory of one coalition over the other at $MVR = 0$ represents a random event. As a result, a significant jump in politicians' attributes would show up only if the two coalitions followed alternative (nonsymmetric) allocation strategies in close electoral races.

The first panel of Table 7 reports the results for the whole sample of members of parliament. On the average, left-wing politicians are older, are less educated, and feature a longer parliament tenure and more local government experience. The right-wing coalition recruits more entrepreneurs, self-employed previous, and lawyers; the left-wing coalition selects more professional politicians, teachers, college professors, union representatives, and females.

The two main political coalitions thus show very different patterns of political selection. Yet the RDD evidence shows that they both converge to the same (high-valence) type in close races. The second panel of Table 7 reports the estimated discontinuity at a zero margin of victory: there is no significant difference between center-right and center-left politicians in any demographic characteristic or previous market and political experience. In particular, education, parliament tenure, gender, and local government experience, despite being different in the whole sample, are perfectly balanced in close races.

Figures 2 through 4 provide a graphical representation of the estimated polynomials and of the jumps at $MVR = 0$. These figures clearly show a pattern of convergence in the predetermined attributes (and valence) of political candidates. For instance, the center-left coalition has fewer candidates with high educational attainments, but allocates all of them to marginal districts, where the gap with the center-right coalition is thus filled; all candidates with lower education are instead allocated to safer districts. Only with respect to the previous occupations, where the two coalitions may be supply-constrained in certain characteristics, does the center-left select fewer entrepreneurs and self-employed previous, and the center-right fewer teachers and professional politicians. These intrinsic differences also remain in close electoral races (see Figure 4).

THE IMPACT OF POLITICAL COMPETITION ON EFFORT

To evaluate whether the degree of ex-ante contestability (C_{ijt}) affects the in-office effort captured by the absenteeism rate (Y_{ijt}) of politician i elected in district j at time t, we run the following regressions:

$$Y_{ijt} = \delta_t + \gamma_j + \tau C_{ijt} + \alpha_1 X_{ijt} + \alpha_2 P_{ijt} + \alpha_3 URB_j + \epsilon_{ijt}, \quad \textbf{(9)}$$

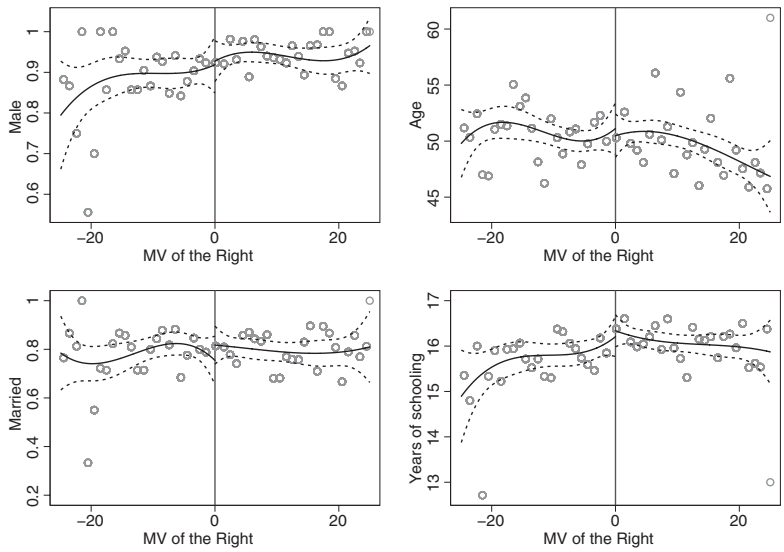
where X_{ijt} are the predetermined individual characteristics, P_{ijt} represent additional postelection characteristics affecting the absenteeism rate (e.g., belonging to the majority coalition or being appointed to a government position), γ_j and δ_t are regional and time fixed effects, the dummy URB_j captures whether the electoral district belongs to an urban or rural area, and the error terms ϵ_{ijt} are corrected for clustering at the individual level. The absenteeism rate is a measure of shirking or rent extraction, because it excludes absences with a legitimate reason; moreover, we control for political appointments that may reduce parliamentary attendance. In the subsample of freshmen, we also control for preelection income, which has been shown

TABLE 7. Partisan Differences in Political Selection, All versus Close Races

	All Sample		Polynomial in $MVR \in [-25, +25]$	
	Difference *Right vs. Left*	Std.Err.	Discontinuity *Right vs. Left*	Std.Err.
Male	0.059***	[0.013]	0.009	[0.042]
Age	−0.804*	[0.427]	−0.643	[1.549]
Married	0.006	[0.019]	0.063	[0.063]
Years of schooling	0.327***	[0.095]	0.13	[0.290]
Freshman	0.106***	[0.023]	−0.013	[0.076]
Parl. appointment	−0.039***	[0.013]	0.008	[0.043]
Govt. appointment	−0.016	[0.011]	0.000	[0.034]
Local govt. experience	−0.039*	[0.023]	0.033	[0.079]
Preelection Income	0.056	[0.035]	0.011	[0.048]
Lawyer	0.119***	[0.016]	0.019	[0.060]
Politician	−0.125***	[0.011]	−0.076**	[0.034]
Teacher	−0.059***	[0.013]	−0.153***	[0.053]
Clerk	−0.054***	[0.009]	0.012	[0.028]
Physician	0.025*	[0.013]	0.06	[0.048]
Entrepreneur	0.137***	[0.013]	0.077*	[0.040]
Selfemp	0.091***	[0.014]	0.111**	[0.048]
Manager	0.022*	[0.012]	0.077*	[0.041]
Professor	−0.092***	[0.014]	−0.089*	[0.046]
Bureaucrat	−0.002	[0.011]	−0.003	[0.037]
Union representative	−0.033***	[0.006]	−0.029	[0.018]
Journalist	−0.005	[0.011]	0.033	[0.032]
Obs.	1,919		1,656	

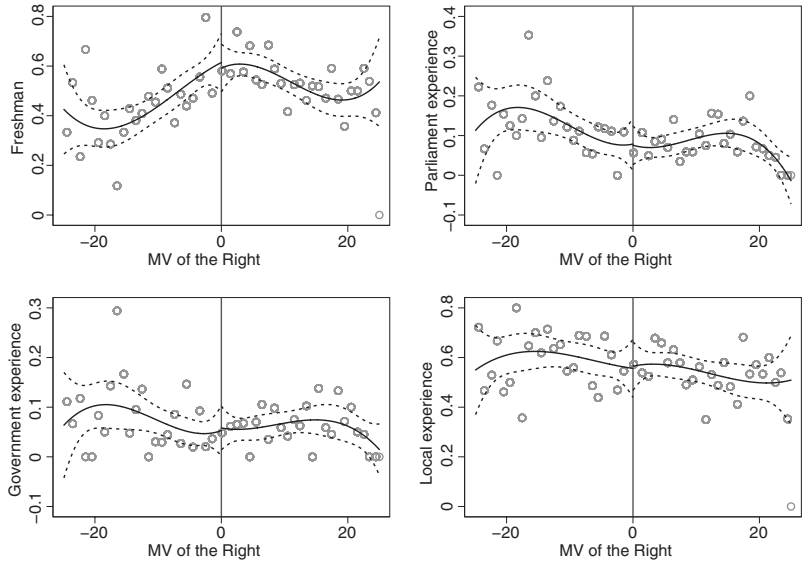
Notes: *Difference* is the difference between the average characteristics of center-right politicians and the average characteristics of center-left politicians in all districts. *Discontinuity* is the estimated difference for close races, i.e., the discontinuity at zero of a split 3^{rd}-order polynomial in the margin of victory of the center-right coalition (MVR), fitted over the interval $MVR \in [-25, +25]$. Standard errors are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. All dependent variables are dummies, except *Age*, *Years of Schooling*, and *Preelection Income* (in million of euros, 2004 prices). *Freshman* means that the previous parliamentary tenure is zero. *Parliament Appointment* captures whether the politician has previously been president or vice president of the parliament, or of a single committee. *Government Appointment* captures whether the politician has previously been minister or vice minister. *Local Government Experience* stands for previous institutional experience at the local level (e.g., mayor). *Preelection Income* is the total taxable income in the year before election (freshmen only). Job dummies refer to the preelection occupation and the omitted category includes blue collars and students. Legislative terms XII, XIII, and XIV.

FIGURE 2. Convergence of Demographic Characteristics in Close Races



Notes: The solid line is a split third-order polynomial in the margin of victory of the center-right coalition (MVR), fitted over the interval $MVR \in [-25, +25]$; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over one-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.

FIGURE 3. Convergence of Political Experience in Close Races



Notes: The solid line is a split third-order polynomial in the margin of victory of the center-right coalition (*MVR*), fitted over the interval $MVR \in [-25, +25]$; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over one-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.

to be a good predictor of outside income and shirking in parliamentary activity (see Gagliarducci, Nannicini, and Naticchioni 2010).

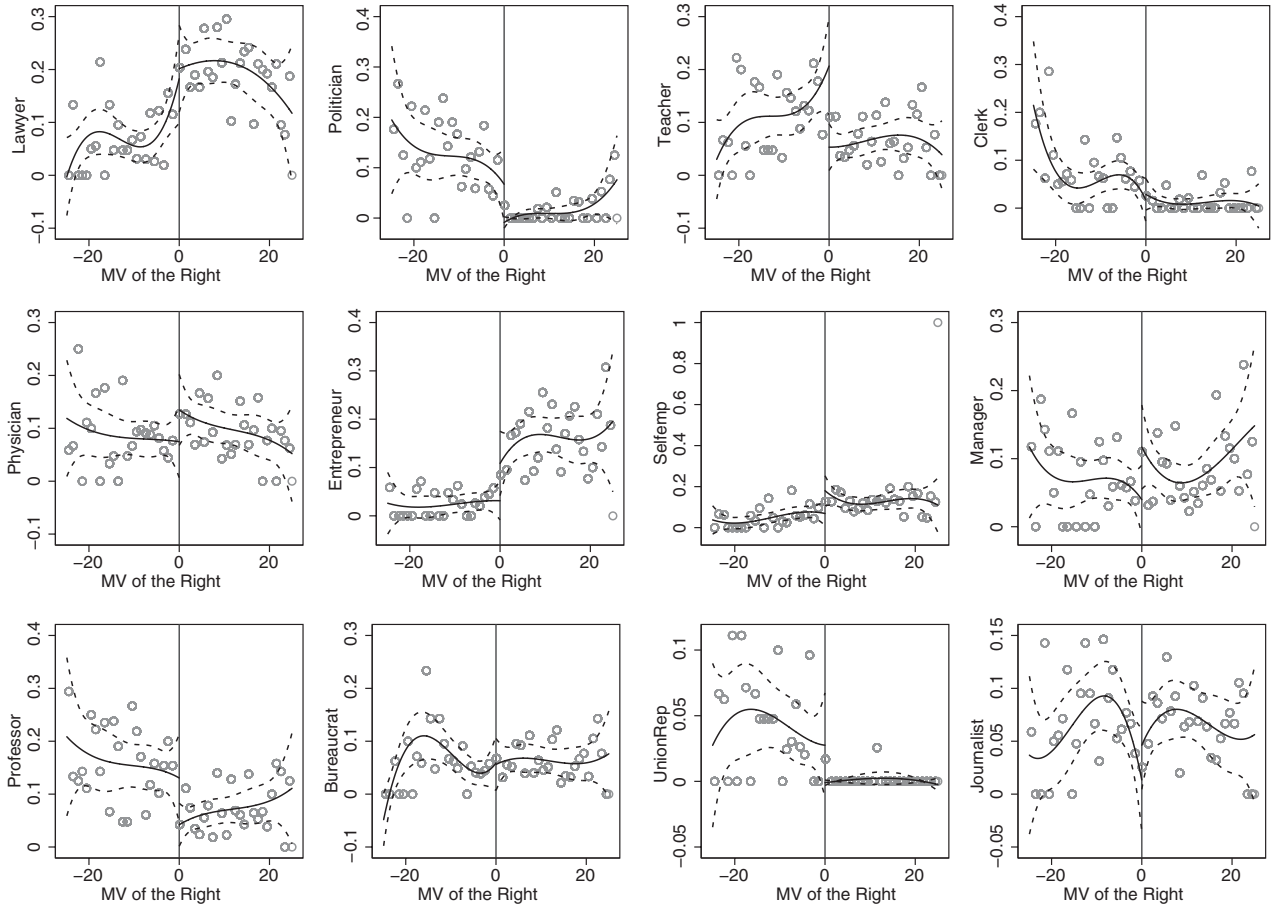
By estimating the impact of ex ante political competition on the future performance of elected officials, we want to assess whether the positive effect of electoral competition on selection also leads to better political outcomes, that is, whether more skilled candidates perform better once in office. Table 8 reports the estimation results. As in Table 6 above, we estimate the baseline specification in three samples (all, no incumbents, and freshmen only) using four measures of political competition (with three of them available for terms XIII and XIV, and one of them—*Safe3*—available for terms XII, XIII, and XIV). The empirical evidence shows that politicians elected in contestable districts display a lower absenteeism rate in electronic parliamentary votes. If we look at the *Safe1* indicator in the subsample without incumbents, for example, running in a contestable district reduces the ex post absences by 4.9 percentage points (i.e., by about 16% with respect to the average). The effects are always significant at the 1% or 5% level, irrespective of the contestability measure we use.[19]

These findings may be driven by selection, but they may also have an alternative explanation: members of parliament facing tougher political competition might choose to exert more effort in order to gain reelection. To disentangle whether the higher productivity of politicians elected in contestable districts arises from the selection of better candidates or from different reelection incentives, we exploit the (exogenous) changes in national coalitions discussed above, which altered the degree of contestability of certain districts from one election to the next. In Table 9, *Safe3* is constructed as before (see equation (6)), whereas *Safe3-next* uses the same method but refers to the next election (keeping into account the variations that occurred in the political alliances within coalitions). As outcome variable, we use the absenteeism rate during the last year of the legislative term, because at that time the new electoral coalitions are known and reelection incentives are probably at their maximum.

Column (1) shows that the effect of the ex ante contestability (*Safe3*) remains strong: even if we control for future reelection incentives (*Safe3-next*), good politicians—elected in contestable districts—reduce their absences by 8.7 percentage points (about 37% with respect to the last-year average). Columns (2) and (3) confirm this result: (bad) politicians elected in safe districts here more absences at the end of the legislative term, both when their district has turned contestable and when it has remained safe. Selection hence matters. Similarly, in columns (3) and (4), we look at the impact of the future contestability of the district on last-year absences, controlling for the ex ante contestability. As expected from the result in column (1), incentives are less relevant. Yet there is still some evidence of an additional accountability effect for low-quality politicians. In fact, if a safe district turns contestable, (bad)

[19] Because the absenteeism rate is bounded between 0 and 1, we also implemented the GLM estimator proposed by Papke and Wooldridge (1996); the results—available upon request—are almost identical to the OLS estimates reported in Table 8. Furthermore, to control fully for unobservable confounding factors at the local level, we also ran OLS estimations with the inclusion of district fixed effects, which deliver qualitatively similar results (also available upon request).

FIGURE 4. Convergence of Market Experience in Close Races



Notes: The solid line is a split third-order polynomial in the margin of victory of the center-right coalition (*MVR*), fitted over the interval $MVR \in [-25, +25]$; see also Table 7. The dashed lines are the 95% confidence interval of the polynomial. Scatter points are averaged over one-unit intervals; points to the left (right) of the vertical line at zero refer to left-wing (right-wing) politicians. Legislative terms XII, XIII, and XIV; 1,656 observations.

politicians tend to exert more effort (by 4 percentage points, about 17%). But the opposite does not hold: (good) politicians elected in contestable districts show high productivity even when their districts turn safe.

Finally, note that the change in the degree of contestability for the districts that from safe turned contestable, or vice versa, is indeed large in our data, especially because of the coalition adjustments that took place between the 1996 election (when the center-right ran without "Lega Nord" and the center-left with "Rifondazione Comunista") and the 2001 election (when the center-right ran with "Lega Nord" and the center-left without "Rifondazione Comunista"). As a result of this reshuffling, in the districts that from contestable turned safe, the average margin of victory doubled (from 7% to 14%); whereas in the districts that from safe turned contestable, it was almost halved (from 15% to 8%). In the other districts, the variation in the average margin of victory was much lower: from 11% to 10% in districts that remained contestable; from 15% to 13% in districts that remained safe. These variations thus provide enough power to our test so that the above results can be interpreted as a way to disentangle the selection from the incentive channel of the impact of political competition on effort in parliamentary work.

CONCLUSION

In this paper, we address a recurring question in political science and political economy: is electoral competition as quality-enhancing as economic competition? We provide a positive answer and suggest a possible channel: the selection of high-quality candidates by political parties that want to attract unaligned voters.

Our theoretical model provides a crucial role for the parties in selecting and allocating politicians to the different electoral districts. Hence, we disregard self-selection by individual politicians and concentrate on the effect of political competition on party selection. Our ideological parties select party loyalists and experts—who are highly valued by the swing voters, but costly for the parties—and allocate them into districts in an attempt to increase their probability of winning the election. Political competition pushes political

TABLE 8. The Impact of Political Competition on the Absenteeism Rate

	All sample				No incumbents				Freshmen only			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Safe1	0.046***				0.049***				0.054***			
	[0.012]				[0.014]				[0.019]			
Safe2		0.057***				0.055***				0.045**		
		[0.012]				[0.015]				[0.020]		
MV			0.002***				0.002***				0.003***	
			[0.001]				[0.001]				[0.001]	
Safe3				0.066***				0.067***				0.079***
				[0.011]				[0.011]				[0.014]
Majority coalition	−0.310***	−0.302***	−0.306***	−0.211***	−0.317***	−0.310***	−0.310***	−0.187***	−0.268***	−0.266***	−0.259***	−0.157***
	[0.012]	[0.013]	[0.013]	[0.010]	[0.015]	[0.016]	[0.016]	[0.012]	[0.020]	[0.020]	[0.021]	[0.015]
Male	0.030	0.028	0.031*	0.031*	0.071***	0.066***	0.070***	0.050***	0.072**	0.065**	0.066**	0.048**
	[0.018]	[0.018]	[0.018]	[0.017]	[0.022]	[0.022]	[0.022]	[0.018]	[0.030]	[0.031]	[0.031]	[0.023]
Age	0.000	0.000	0.000	−0.000	−0.001	−0.001	−0.000	−0.000	−0.002*	−0.002*	−0.002	−0.002**
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Married	0.004	0.002	0.003	0.004	−0.008	−0.011	−0.009	−0.001	−0.027	−0.031	−0.028	−0.004
	[0.014]	[0.014]	[0.014]	[0.012]	[0.015]	[0.015]	[0.015]	[0.013]	[0.021]	[0.021]	[0.021]	[0.018]
Years of schooling	0.006*	0.006	0.006	0.003	0.009**	0.009**	0.009**	0.003	0.005	0.004	0.005	0.002
	[0.003]	[0.003]	[0.003]	[0.003]	[0.004]	[0.004]	[0.004]	[0.003]	[0.005]	[0.005]	[0.005]	[0.004]
Parl. appointment	0.035**	0.034**	0.035**	0.029**	0.043**	0.042**	0.042**	0.042**	0.020	0.016	0.021	0.074**
	[0.016]	[0.015]	[0.016]	[0.015]	[0.019]	[0.019]	[0.020]	[0.017]	[0.040]	[0.041]	[0.041]	[0.029]
Govt. appointment	0.016	0.021	0.016	0.043**	0.034	0.041*	0.034	0.072***	0.025	0.033	0.026	0.064*
	[0.016]	[0.017]	[0.017]	[0.020]	[0.022]	[0.022]	[0.022]	[0.024]	[0.043]	[0.043]	[0.043]	[0.037]
Local govt. exp.	−0.027**	−0.027**	−0.027**	−0.029***	−0.046***	−0.044***	−0.044***	−0.041***	−0.082***	−0.080***	−0.078***	−0.053***
	[0.012]	[0.012]	[0.012]	[0.011]	[0.014]	[0.014]	[0.014]	[0.012]	[0.018]	[0.018]	[0.018]	[0.014]
Urban area	0.005	0.005	0.007	0.001	0.008	0.008	0.011	0.007	−0.007	−0.006	−0.004	0.010
	[0.011]	[0.011]	[0.011]	[0.010]	[0.014]	[0.014]	[0.014]	[0.011]	[0.018]	[0.018]	[0.018]	[0.014]
Preelect. income									−0.006	−0.001	−0.006	0.043***
									[0.066]	[0.062]	[0.062]	[0.009]
Job fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Region fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Obs.	1,307	1,307	1,307	1,977	896	896	896	1,566	531	531	531	978

Notes: Dependent variable: absenteeism rate. OLS estimations. *MV* is the lagged margin of victory in the single-member district (available for legislative terms XIII and XIV). *Safe1* is equal to one if *MV* is greater than 5 percentage points. *Safe2* is equal to one if *MV* is greater than 10 percentage points. *Safe3* is equal to one if $(1 - L - R)/|L - R| < 1$, where L (R) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of ideological votes at the European elections (available for legislative terms XII, XIII, and XIV). *Urban Area* is a dummy capturing whether the electoral district belongs to an urban or rural area. Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

TABLE 9. Political Competition and Absences in the Last Year of the Term

	(1) All sample	(2) *Safe3-next* = 0	(3) *Safe3-next* = 1	(4) *Safe3* = 0	(5) *Safe3* = 1
Safe3	0.087***	0.085***	0.064*		
	[0.016]	[0.021]	[0.034]		
Safe3-next	0.011			−0.039	0.040**
	[0.015]			[0.027]	[0.020]
Majority coalition	−0.043***	−0.119***	0.036	−0.105***	−0.008
	[0.014]	[0.022]	[0.022]	[0.023]	[0.019]
Male	−0.002	−0.009	0.007	−0.001	0.002
	[0.027]	[0.032]	[0.037]	[0.037]	[0.037]
Age	−0.001	0.000	−0.002*	0.001	−0.001
	[0.001]	[0.001]	[0.001]	[0.002]	[0.001]
Married	0.014	−0.006	0.042*	−0.045*	0.042*
	[0.018]	[0.021]	[0.026]	[0.025]	[0.022]
Years of schooling	0.000	0.007	−0.006	0.010	−0.005
	[0.005]	[0.006]	[0.007]	[0.006]	[0.006]
Parl. appointment	0.029	−0.018	0.110***	−0.018	0.042
	[0.025]	[0.029]	[0.042]	[0.037]	[0.032]
Govt. appointment	0.081**	0.078**	0.120**	0.084*	0.072
	[0.034]	[0.037]	[0.061]	[0.045]	[0.044]
Local govt. experience	−0.010	−0.017	0.015	−0.046**	0.015
	[0.015]	[0.019]	[0.023]	[0.023]	[0.020]
Urban area	−0.005	−0.033*	0.028	0.022	−0.007
	[0.015]	[0.019]	[0.025]	[0.022]	[0.019]
Job fixed effects	yes	yes	yes	yes	
Region fixed effects	yes	yes	yes	yes	
Obs.	902	525	377	326	576

Notes: Dependent variable: absenteeism rate in the last year of the legislative term. OLS estimations. House of Representatives only. *Safe3* is equal to one if $(1 - L - R)/|L - R| < 1$, where L (R) captures the expected share of voters for the center-left (center-right) coalition, estimated by means of the votes at the previous European elections (available for legislative terms XII, XIII, and XIV). *Safe3-next* is calculated in the same way but keeping into account the variations in national political coalitions at the following election, in order to capture reelection incentives. *Urban area* is a dummy capturing whether the electoral district belongs to an urban or rural area. Job fixed effects refer to the preelection occupation (see Table 4). Region fixed effects refer to ISTAT geographic classification (see Table 2). Robust standard errors clustered at the individual level in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

parties to increase the share of (high-valence) experts, and to allocate them to the most contestable districts.

The ground field to test this prediction is the Italian majoritarian political system between 1994 and 2006. And the empirical evidence supports our prediction. Ex ante valence—as measured by years of schooling, previous market income, and local government experience—increases the probability of running in a contestable district. Evidence from a regression discontinuity design shows that, despite being different on average, the personal attributes of the politicians of the two major coalitions converge to high-valence levels in close electoral races. Politicians elected in nonsafe districts also have a better level of ex post quality, as measured by their absenteeism rate in parliament. This higher effort is driven more by the selection of better politicians than by reelection incentives. Accountability does, however, play an additional role, at least for low-quality candidates: if a safe district turns contestable, politicians tend to exert more effort. Yet high-quality politicians elected in contestable districts do not reduce their ex post productivity even when their districts become safe.

Our results have normative implications. They encourage the adoption of institutions and policies aimed at enhancing both political competition and voters' information on the quality of individual candidates. For example, in a majoritarian system, the amount of ex ante contestability could be increased by "optimal" gerrymandering that evens out the relative shares of the main parties' ideological voters across electoral districts. We leave the study of these implications to future research.

APPENDIX

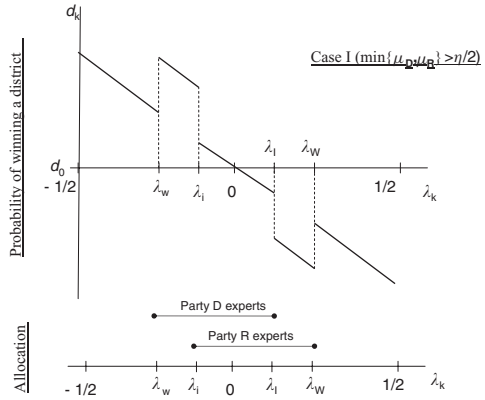
Formal Version of Proposition 1

Before a formal version of Proposition 1 is provided, it is convenient to introduce some definitions. Define Λ^D, party-D allocation of experts, as the union of the district intervals $\Lambda_i^D = [\lambda_I^i, \lambda_{II}^i]$ where party D allocates its experts, $\Lambda^D = \cup_i \Lambda_i^D$, and analogously Λ^R for party R. Moreover, define $z = \mu_D - \mu_R \in [-1, 1]$, as the difference in the share of experts between party D and R.

Proposition 1. *Parties allocate experts in district intervals as follows.*[20]

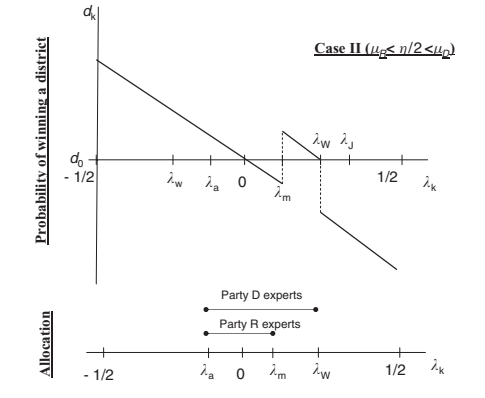
[20] In the above proposition, the probabilities of winning the election for the two parties are obtained for a uniform distribution of the popularity shock. All the results on the allocation of

FIGURE 5. Equilibrium Allocation Game, Case I



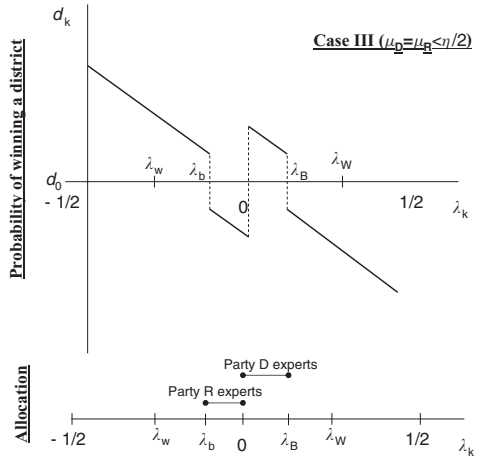
Notes: For $\mu \geq \eta/2$, parties have enough experts and will hence send them to cover these critical districts. The allocation of additional experts does not affect the probability of winning the election, which remains equal to 50%, although it modifies the share of seats obtained by the party. If one party (say party *R*) has exactly the share of experts to span its critical districts, i.e., $\mu_R = \eta/2 = G(\lambda_W) - G(\lambda_0)$, party *D* may increase its probability of winning the election above 50% by sending experts to the districts in the interval $[\lambda_0, \lambda_\Xi]$. In this case, in fact, party *D* will win the election for popularity shocks such that $\delta < 0$, and it will tie the elections for some positive realizations of the popularity shock, $\delta \in [0, W]$. The figure displays a case in which parties span their experts on the relevant contestable districts that are biased in their favor, and send additional experts to the districts that are more favorable to the opposing party, hence matching experts around the most contestable district, λ_0.

FIGURE 6. Equilibrium Allocation Game, Case II



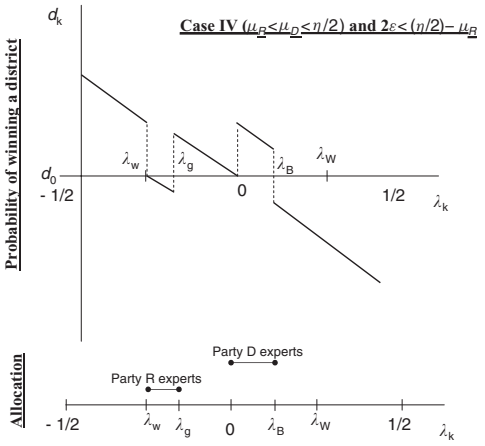
Notes: One party—say party *D*—has enough experts to span the crucial districts, but the other does not, then the allocation strategies change radically. To see this, notice that, despite the advantage in the share of experts, $\mu_D > \mu_R$, the "defensive" strategy adopted in the previous case by party *D*, i.e., sending experts to districts $[\lambda_w, \lambda_\Xi]$, could easily be neutralized by party *R*, which, by sending its (few) experts to the districts $[\lambda_\varepsilon, \lambda_\Xi]$, would restore the probability of winning the election to 50%. Instead of using this (losing) defensive strategy, party *D* will prefer to allocate its experts to the contestable districts, which ex ante favor its opponent, and thus to $[\lambda_a, \lambda_W]$. Party-*R* best response will be to match party-*D* experts in the competitive districts in the interval $[\lambda_a, \lambda_W]$. In equilibrium, given the allocation of experts, as shown in the figure, party *D* will exploit its larger share of experts to increase its probability of winning the election above 50%.

FIGURE 7. Equilibrium Allocation Game, Case III



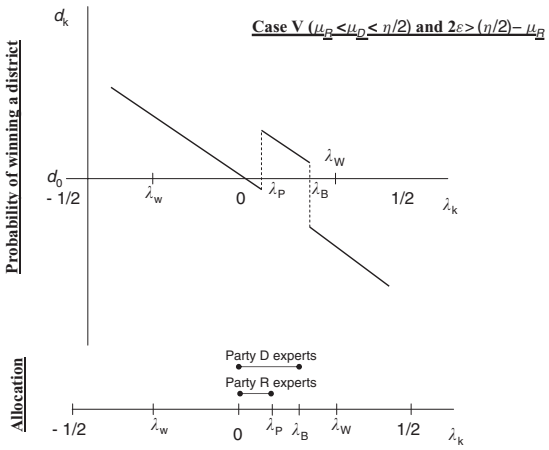
Notes: Case III in the above proposition represents the symmetric case, in which $\mu_D = \mu_R \leq \eta/2$. Party *D* will send experts to districts $[\lambda_0, \lambda_A]$, as shown in the figure (bottom panel); and analogously for party *R*. The figure (top panel) also shows how this offensive strategy turns some of the districts ex ante close to party *R* (namely, those between λ_0 and λ_B) in favor of party *D*, and vice versa for the districts between λ_b and λ_0. In equilibrium, both parties have equal probability of winning the election.

FIGURE 8. Equilibrium Allocation Game, Case IV



Notes: Case IV considers the asymmetric situation, in which party *D* has marginally more experts than party *R* (i.e., *z* is small enough) but both parties are unable to span the crucial districts, i.e., $\mu_R < \mu_D < \eta/2$. Party *D* will continue to follow the strategy described above, as shown in the figure. Party *R* has instead fewer experts to spare, and it is thus unable to match party *D* action with a symmetric allocation (as done in the previous case). Its objective is to minimize party-*D* probability of winning the election. To do this, the optimal response by party *R* is to try to gain some of the districts that would be in favor of party *D*, if the realization of the popularity shock, δ, allows party *D* to win by a small margin. In particular, party *R* will send experts to districts $[\lambda_w, \lambda_g]$, as shown in the figure (bottom panel), and party *D* will win the election with probability $\Pi_D = 1/2 + [(1 - \lambda^C)/\lambda^C]\psi z$.

FIGURE 9. Equilibrium Allocation Game, Case V



Notes: When the asymmetry is larger, because party *D* has several more experts than party *R* (i.e., *z* is large), although neither party spans the crucial districts, party *D* strategy remains unchanged, and experts are thus sent to $[\lambda_0, \lambda_B]$. In an attempt to limit party *D* electoral chances, also party *R* will allocate its few experts to the right of the more competitive districts, as shown in the figure. The resulting probability of winning the election for party *D* is $\Pi_D = 1/2 + [(1-\lambda^C)/2\lambda^C]\psi(\frac{\eta}{2} - \mu_R)$.

(I) *For* $\eta/2 \le \min\{\mu_D, \mu_R\}$, *party-D allocation of experts* Λ^D *includes* $\Lambda_i^D = [\lambda_I^i, \lambda_{II}^i]$ *with* $\lambda_I^i < \lambda_w$ *and* $\lambda_{II}^i > \lambda_\Xi$; *and party-R allocation* Λ^R *includes* $\Lambda_i^R = [\lambda_I^i, \lambda_{II}^i]$ *with* $\lambda_I^i < \lambda_\varepsilon$ *and* $\lambda_{II}^i > \lambda_W$. *For* $\eta/2 < \min\{\mu_D, \mu_R\}$, *parties have equal probability of winning the elections,* $\Pi_D = \Pi_R = 1/2$; *for* $\mu_D > \eta/2 = \mu_R$, *parties probability of winning the elections are* $\Pi_D = 1/2 + \psi[(1-\lambda^C)/\lambda^C]\eta/4$ *and* $\Pi_R = 1 - \Pi_D$; *and analogously for* $\mu_R > \eta/2 = \mu_D$. *See Figure 5.*

(II) *For* $\mu_D > \eta/2 > \mu_R$, *party-D allocation of experts is* $\Lambda^D = [\lambda_a, \lambda_W]$, *such that* $G(\lambda_W) - G(\lambda_a) = \mu_D$, *and party-R allocation is* $\Lambda^R = [\lambda_j, \lambda_m]$, *such that* $G(\lambda_m) - G(\lambda_a) = \mu_R$ *and* $\lambda_j = \max\{\lambda_a, \lambda_w\}$. *Parties' probabilities of winning the elections are* $\Pi_D = 1/2 + [(1-\lambda^C)/2\lambda^C]\psi z$ *and* $\Pi_R = 1 - \Pi_D$. *And analogously for* $\mu_R > \eta/2 > \mu_D$. *See Figure 6.*

(III) *For* $\mu_D = \mu_R = \mu \le \eta/2$, *party-D allocation of experts is* $\Lambda^D = [\lambda_0, \lambda_B]$, *such that* $G(\lambda_B) = 1/2 + \mu$, *and party-R allocation is* $\Lambda^R = [\lambda_b, \lambda_0]$, *such that* $G(\lambda_b) = 1/2 - \mu$. *Parties have equal probability of winning the elections,* $\Pi_D = \Pi_R = 1/2$. *See Figure 7.*

(IV) *For* $\mu_R < \mu_D < \eta/2$ *and* $z < (\eta/2 - \mu_R)/2$, *party-D allocation of experts is* $\Lambda^D = [\lambda_0, \lambda_B]$, *such that* $G(\lambda_B) = 1/2 + \mu_D$, *and party-R allocation is* $\Lambda^R = [\lambda_w, \lambda_g]$, *such that* $G(\lambda_g) - G(\lambda_w) = \mu_R$. *Parties' probabilities of winning the elections are* $\Pi_D = 1/2 + [(1-\lambda^C)/\lambda^C]\psi z$ *and* $\Pi_R = 1 - \Pi_D$. *And analogously for* $\mu_D < \mu_R < \eta/2$ *and* $z < (\eta/2 - \mu_D)/2$. *See Figure 8.*

(V) *For* $\mu_R < \mu_D \le \eta/2$ *and* $z \ge (\eta/2 - \mu_R)/2$, *party-D allocation of experts is* $\Lambda^D = [\lambda_0, \lambda_B]$, *such that* $G(\lambda_B) = 1/2 + \mu_D$, *and party-R allocation is* $\Lambda^R = [\lambda_0, \lambda_c]$, *such that* $G(\lambda_c) = 1/2 + \mu_R$. *Parties' probabilities of winning the elections are* $\Pi_D = 1/2 + [(1-\lambda^C)/2\lambda^C]\psi(\eta/2 - \mu_R)$ *and* $\Pi_R = 1 - \Pi_D$. *And analogously for* $\mu_D < \mu_R \le \eta/2$ *and* $z \ge (\eta/2 - \mu_R)/2$. *See Figure 9.*

Proof. See the supplemental online Appendix at http://www.journals.cambridge.org/psr2011002 ■

REFERENCES

Alesina, A. 1988. "Credibility and Policy Convergence in a Two-party System with Rational Voters." *American Economic Review* 78 (4), 796–806.

Ansolabehere, S., and J. Snyder. 2000. "Valence Politics and Equilibrium in Spatial Election Models." *Public Choice* 103: 327–36.

Aragones, E., and T. R., Palfrey. 2002. "Mixed Equilibrium in a Downsian Model with a Favored Candidate." *Journal of Economic Theory* 103: 131–61.

Ashworth, S., and E., Bueno de Mesquita. 2007 "Valence Competition and Platform Divergence." Mimeo, University of Chicago.

Atkinson, M. D., R. D., Enos, and S. J. Hill. 2009. "Candidate Faces and Election Outcomes: Is the Face–Vote Correlation Caused by Candidate Selection?" *Quarterly Journal of Political Science* 4: 229–49.

Bertrand, M., and A. Schoar. 2003. "Managing with Style: The Effect of Managers on Firm Policies." *Quarterly Journal of Economics* 118 (4): 1169–3208.

Besley, T. 2004. Paying Politicians: Theory and Evidence. *Journal of the European Association* 2: 193–215.

Besley, T. 2005. "Political Selection." *Journal of Economic Perspectives* 19: 43–60.

Besley, T., T. Persson, and D. M. Sturm. N.d. "Political Competition, Policy and Growth: Theory and Evidence from the United States." *Review of Economic Studies*. Forthcoming.

Besley, T., and I. Preston. 2007. "Electoral Bias and Policy Choice: Theory and Evidence." *Quarterly Journal of Economics* 122 (4): 1473–1510.

Besley, T., and M. Reynal-Querol. 2009. "Do Democracies Select Better Leaders?" Mimeo, London School of Economics.

Black, G. S. 1972. "A Theory of Political Ambition: Career Choices and the Role of Structural Incentives." *American Political Science Review* 66: 144–59.

Carrillo, J. D., and T. Mariotti. 2001. "Electoral Competition and Politicians Turnover." *European Economic Review* 45: 1–25.

Caselli, F., and M. Morelli. 2004. "Bad Politicians." *Journal of Public Economics* 88: 759–82.

Clark, M. 2009. "Valence and Electoral Outcomes in Western Europe, 1976–1998." *Electoral Studies* 28: 111–22.

Cooter, R. D. 2002. "Who Gets on Top in Democracy? Elections as Filters." In *The Selected Works of Robert Cooter*. http://works.bepress.com/robert_cooter/52. (accessed November 29, 2010)

Dal Bo, E., P. Dal Bo, and R. Di Tella. 2006. "Plata o Plomo? Bribe and Punishment in a Theory of Political Influence." *American Political Science Review* 100 (1): 41–53.

Dal Bo, E., P. Dal Bo. and J. Snyder. 2009. "Political Dynasties." *Review of Economic Studies* 76 (1): 115–42.

Dal Bo, E., and R. Di Tella, 2003. "Capture by Threat." *Journal of Political Economy* 111 (5): 1123–54.

Dewan, T. and D. P. Myatt. 2007. "Leading the Party: Coordination, Direction, and Communication." *American Political Science Review* 101 (4): 827–45.

Dewan, T., and D. P. Myatt. 2008. "Leading the Party: The Qualities of Leadership: Direction, Communication, and Obfuscation." *American Political Science Review* 102 (3): 351–68.

Dickson, E. S. and K. Scheve. 2006. "Social Identity, Political Speech, and Electoral Competition." *The Journal of Theoretical Politics* 18 (1). 5–39.

candidates for the five cases described above are robust to using any symmetric distribution of the popularity shock with zero mean. Clearly, the probabilities of winning the election for the two parties, in all but case III, would change accordingly to the adopted distribution function. In particular, for any symmetric cumulative distribution function $F(.)$, we would have the following probability of winning the election for party *D*. In case (i) for $\eta/2 < \min\{\mu_D, \mu_R\}$, $\Pi_D = 1/2 + (1/2)[F(W) - F(0)]$; in case (ii) $\Pi_D = F([(1-\lambda^C)/2\lambda^C]z)$; in case (iv) $\Pi_D = F([(1-\lambda^C)/\lambda^C]z)$; and in case (v) $\Pi_D = F([(1-\lambda^C)/2\lambda^C](\eta/2 - \mu_R))$.

Di Virgilio, A. 1998. "Electoral Alliances: Party Identities and Coalition Games." *European Journal of Political Research* 34: 5–33.
Enelow, J. M., and M. J. Hinich. 1982. "Nonspatial Candidate Characteristics." *Journal of Politics* 44 (1): 115–30.
Ferrara, F. 2004a. "Electoral Coordination and the Strategic Desertion of Strong Parties in Compensatory Mixed Systems with Negative Vote Transfers." *Electoral Studies* 23: 391–413.
Ferrara, F. 2004b. "Frogs, Mice and Mixed Electoral Institutions: Party Discipline in Italy's XIV Chamber of Deputies." *Journal of Legislative Studies* 10 (4): 10–31.
Ferreira, F., and J. Gyourko. 2009. "Do Political Parties Matter? Evidence from U.S. Cities." *Quarterly Journal of Economics* 124 (1): 349–97.
Gagliarducci, S., T. Nannicini, and P. Naticchioni, 2010. "Moonlighting Politicians." *Journal of Public Economics* 94 (9/10), 688–99.
Green, J. 2007. "When Voters and Parties Agree: Valence Issues and Party Competition." *Political Studies* 55: 629–55.
Groseclose, T. J. 2001. "A Model of Candidate Location When One Voter has a Valence Advantage." *American Journal of Political Science* 45 (4): 862–86.
Jacobson, G. C. 1989. "Strategic Politicians and the Dynamics of U.S. House Elections, 1946–86." *American Political Science Review* 83 (3): 773–93.
Jones, B., and B. Olken. 2005. "Do Leaders Matter? National Leadership and Growth since World War II." *Quarterly Journal of Economics* 120 (3): 835–64.
Krasno, J. S., and D. P. Green. 1988. "Preempting Quality Challengers in House Elections." *Journal of Politics* 50: 920–36.
Lee, D. S. 2008. "Randomized Experiments from Non-random Selection in the U.S. House Elections." *Journal of Econometrics* 142 (2): 675–497.
Legrenzi, P. 1998. "La crisi di ottobre del governo Prodi." *Politica in Italia* 69–85.
Lindbeck, A., and J. Weibull. 1987. "Balanced-budget Redistribution as the Outcome of Political Competition." *Public Choice* 52: 273–97.
Mattozzi, A., and A. Merlo. 2008. "Political Careers or Career Politicians." *Journal of Public Economics* 92: 597–608.
Mattozzi, A., and A. Merlo. 2010. "Mediocracy." Mimeo, University of Pennsylvania.
Merlo, A., V. Galasso, M. Landi, and A. Mattozzi. 2010. "The Labor Market of Italian Politicians." In *The Ruling Class*, eds. T. Boeri, A. Merlo, and A. Prat. New York: Oxford University Press, 7–95.
Myerson, R. B. 2006. "Federalism and Incentives for Success of Democracy." *Quarterly Journal of Political Science* 1: 3–23.
Papke, L. E., and J. Wooldridge. 1996. "Econometric Methods for Fractional Response Variables with an Application to 401(k) Plan Participation Rates." *Journal of Applied Econometrics* 11: 619–32.
Pettersson-Lidbom, P. 2008. "Do Parties Matter for Economic Outcomes? A Regression-Discontinuity Approach." *Journal of the European Economic Association* 6: 1037–56.
Schofield, N. J. 2003. "Valence Competition in the Spatial Stochastic Model." *Journal of Theoretical Politics* 15 (4): 371–83.
Shugart, M. S., M. E. Valdini, and K. Suominen. 2005. "Looking for Locals: Voter Information Demands and Personal Vote-earning Attributes of Legislators under Proportional Representation." *American Journal of Political Science* 49 (2): 437–49.
Stigler, G. J. 1972. "Economic Competition and Political Competition." *Public Choice* 13: 91–106.
Stokes, D. E. 1963. "Spatial Models of Party Competition." *American Political Science Review* 57 (2): 368–77.
Stokes, D. E. 1992. "Valence Politics." In *Electoral Politics*, ed. D. Kavanagh. Oxford, Clarendon Press, 141–62.
Stone, W. J., L. S. Maisel, and C. D. Maestas. 2004. "Quality Counts: Extending the Strategic Politician Model of Incumbent Deterrence." *American Journal of Political Science* 48 (3): 479–95.
Stromberg, D. 2008. "How the Electoral College Influences Campaigns and Policy: The Probability of Being Florida." *American Economic Review* 98 (3): 769–807.
Verzichelli, L. 1998. "The Parliamentary Elite in Transition." *European Journal of Political Research* 34: 121–50.
Wittman, D. 1989. "Why Democracies Produce Efficient Results." *Journal of Political Economy* 97 (6): 1395–1424.
Zhang, Y., and R. Congleton. 2008. "Is It All about Competence? The Human Capital of U.S. Presidents and Economic Performance." Mimeo, George Mason University.